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The Mediating Role Of Dimensions Of Help-Seeking Constructs In Explaining The Relation Between Student Motivational Orientation And Mathematics Achievement

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**BAHIR DAR UNIVERSITY
COLLEGE OF EDUCATION
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DEPARTMENT OF PSYCHOLOGY**

**The Mediating Role of Dimensions of Help-Seeking Constructs in
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By

Fasika Teshale Wole

November, 2025

BAHIR DAR

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**The Mediating Role of Dimensions of Help-Seeking Constructs in
Explaining the Relation between Students' Motivational Orientation
and Mathematics Achievement**

**A Dissertation Submitted in Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy in Educational Psychology**

**By
Fasika Teshale Wole**

Principal Advisor: Prof. Reda Darge

Co-Advisor: Dr. Amare Sahile (Asso. Professor)

November, 2025

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DECLARATION

This is to certify that the thesis entitled “**The Mediating Role of Dimensions of Help-Seeking Constructs in Explaining the Relation between Students’ Motivational Orientation and Mathematics Achievement**”, submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in **Educational Psychology**, Department of **Psychology**, Bahir Dar University, is a record of original work carried out by me and has never been submitted to this or any other institution to get any other degree or certificates. The assistance and help I received during the course of this investigation have been duly acknowledged.

Fasika Teshale Wole

Name of the candidate

Signature

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DEPARTMENT OF PSYCHOLOGY**

Approval of Dissertation for Defense

We hereby certify that we have supervised, read, and evaluated this dissertation titled **“The Mediating Role of Dimensions of Help Seeking Constructs in Explaining the Relation between Students’ Motivational Orientation and Mathematics Achievement”** by **Fasika Teshale Wole** prepared under our guidance. We recommend the dissertation paper submitted for oral defense.

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DEPARTMENT OF PSYCHOLOGY**

Approval of Dissertation for Defense Result

As members of the board of examiners, we examined this dissertation entitled “**The Mediating Role of Dimensions of Help Seeking Constructs in Explaining the Relation between Students’ Motivational Orientation and Mathematics Achievement**” by **Fasika Teshale Wole**. We hereby certify that the dissertation is accepted for fulfilling the requirements for the award of the degree of “**Doctor of Philosophy in Educational Psychology**”.

Board of Examiners

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Chair person’s name	Signature	Date
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ABSTRACT

Given its relevance across various fields of study, achievement in mathematics can influence students' learning and future career paths. Accordingly, identifying the factors that influence students' mathematics achievement is important for supporting and improving their learning outcomes. The main objective of this study was to examine the mediating role of help-seeking constructs (attitude toward help-seeking (ATHS) and academic help-seeking behavior (AHSB)) in explaining the relationship between students' motivational orientations (social skills (SS) and social goal orientation (SGO)), and mathematics achievement (MA) among 924 Grade 8 students. Participants were selected using a systematic random sampling technique, by which a proportional number of students were chosen from each school. The study employed a quantitative approach and a correlational research design. Data were collected using the Social Skills Questionnaire (SSQ), Social Goal Orientation Questionnaire (SGOQ), Attitude Toward Help-Seeking Questionnaire (ATHSQ), and Academic Help-Seeking Behavior Questionnaire (AHSBQ). Data on mathematics achievement were obtained from official school records. Analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM), and the findings revealed significant parallel and sequential mediating roles of ATHS and AHSB in the relationship between SS and SGO with MA. Also, the findings confirmed that ATHS and AHSB are part of the mechanisms through which SS and SGO influence students' mathematics achievement. Based on the results, the study recommends that schools and educators need to strive to develop students' social skills and foster intimate peer relationships to promote positive attitudes toward help-seeking and encourage academic help-seeking behavior, ultimately enhancing mathematics achievement. Finally, the research underscores the importance of implementing comprehensive interventions to support and improve students' achievement in mathematics.

Keywords: *academic help-seeking behavior, attitude towards help seeking, mathematics achievement, social goal orientation, and social skill*

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LIST OF ABBREVIATIONS

ATHSQ - Attitude towards Help Seeking Questionnaire

AVE - Average Variance Extracted

BDU - Bahir Dar University

CAHSS - College Algebra Help Seeking Scales

CFA - Confirmatory Factor Analysis

CFI - Comparative-Fit-Index

CSHSS - Computer Science Help-Seeking Scales

df - Degree of Freedom

GFI - Goodness-of-Fit-Index

GLM - General Linear Model

IFI - Incremental Fit Index

MA – Mathematics Achievement

MHSBQ - Mathematics Help-Seeking Behaviors Questionnaire

MLCQ - Mathematics Learning in the Classroom Questionnaire

MoE – Ministry of Education

NCTM - National Council of Teachers of Mathematics

NEAEA - National Educational Assessment and Examinations Agency

NFI - Normed Fit Index

PISA - Program for International Student Assessment

PLS-SEM - Partial Least Squares Structural Equations Modeling

RMSEA - Root-Mean-Square-Error-of-Approximation

SEM - Structural Equation Modeling

SGOQ - Social Goal Orientation Questionnaire

SPSS - Statistical Package for Social Sciences

SRL – Self-Regulated Learning

SRMR - Standardized-Root-Mean-Square-Residual

SSQ - Social Skill Questionnaires

SSRS-C - Social Skills Rating Systems Child version

SSRS - Social Skills Rating System

STEM - Science, Technology, Engineering, and Maths

TIMSS - Trends in International Mathematics and Science Study

CHAPTER ONE

INTRODUCTION

This chapter introduces the study and is systematically organized into seven sections. First, the background reviews related literature on the research constructs, including possible mediating factors. The second section presents the statement of the problem, highlighting gaps in the literature. The following sections sequentially outline the objectives, research questions, significance, and delimitations of the study. Finally, key terms used in the study are defined.

1.1. Background of the Study

The National Council of Teachers of Mathematics (NCTM, 2000) challenges the assumption that mathematics is only for the select few, suggesting instead that everyone can benefit from understanding mathematics (Brezavšček et al., 2020; Deringöl, 2018). Mathematical skills are generally regarded as important not only for academic success but also for effective functioning in everyday life (Abalde & Oco, 2023). Learning mathematics may help students develop accuracy, consistency, mental discipline, critical thinking, and rationality skills that can contribute to more effective and responsible problem-solving and decision-making (Bhat, 2014; Yıldırım et al., 2006).

Moreover, as a basic branch of science, mathematics is a focal area for scientific studies, technological developments, and community life (Tran & Nguyen, 2021). In this logic, no other subject forms a strong correlation among diverse subdivisions of science as mathematics, and without mathematics, knowledge of science often remains unrealistic (Tran & Nguyen, 2021; Yıldırım et al., 2006). Recognizing its social, economic, and academic relevance, the Ethiopian Ministry of Education (MoE) recommended that

mathematics should be taught as one of the core subjects in general education. In Ethiopia, mathematics has been an inseparable part of the school curriculum since kindergarten, and it is one of the most important subjects at school (Tiruneh et al., 2021).

However, although there is global awareness on the importance of mathematical knowledge, research has revealed that students at various levels of education often experience underachievement in mathematics (e.g. , Brezavšček et al., 2020; Getahun et al., 2016; Wahid et al., 2014). Similarly, Abalde and Oco (2023) explain that studying mathematics across different levels of educational hierarchy remains one of the most challenging tasks for many students, resulting in poor achievement in mathematics and related subjects. Therefore, students' performance in mathematics, from primary school to higher education, continues to be a topic of concern.

In addition to the findings of Brezavšček et al. (2020) and Abalde and Oco (2023) regarding students' underachievement in mathematics, I have also drawn insights from my own experience. As a mathematics teacher for six years at the primary school level, I had the opportunity to closely observe students' challenges and levels of achievement in mathematics. Accordingly, as a researcher, in view of the plain importance of learning mathematics and observed students' underachievement in mathematics, it is appropriate as well as befitting to study the factors that influence students' mathematics achievement. Besides, Pipere and Mieriņa (2017) describe that the search for constructs determining students' learning achievement in different subjects, especially in such a significant subject as mathematics, is at the top of the list for educational psychologists and educators.

Research concerning academic achievement indicated that students' academic achievement cannot be uniquely attributed to differences in cognitive skills and subject knowledge (Ozcan, 2021). Instead, students' achievement is the result of the complex interplay among cognitive and non-cognitive factors, including motivational factors, self-regulation strategies, and other factors that influence each other (Eng et al., 2010; Lim & Chapman, 2015). Consistent with this, a growing number of studies have been focusing on how academic achievement is affected by non-cognitive variables, i.e., those not captured by the assessment of cognitive ability and knowledge (Abalde & Oco, 2023; Brezavšček et al., 2020; Pipere & Mieriņa, 2017).

Over the past three decades, researchers have identified several factors that significantly influence students' academic achievement, particularly in mathematics (Wahid et al., 2014). Among these factors, enhancing motivational conditions in the classroom is crucial for improving mathematics teaching and learning, given its strong relationship with student behavior and achievement (Ozcan, 2021; Pantziara & Philippou, 2015). Motivational orientation plays a formative role in learning, acting as the force that directs and regulates students' behavior (Pipere & Mieriņa, 2017). It enables educators and researchers to get some clues to understand students' behaviors and efforts in doing various activities (Sproule et al., 2007).

Moreover, Lim and Chapman (2015) asserted that motivational orientation is one of the most non-cognitive variables that has a strong correlation with mathematics achievement. They argued that motivation is an important factor in students' learning and achievement. Supporting this idea, Aeschlimann et al. (2016) stated that enhancing motivational conditions in mathematics and science classes is a promising intervention

strategy to better encourage students to participate in science, technology, engineering, and mathematics occupations. Motivation orientations seem to be increasingly attracting research attention in mathematics education with the intention of understanding and enhancing students' learning and achievement (Benitez et al., 2020; Pipere & Mierina, 2017).

Accordingly, given the social nature of learning and the school environment, there has been a growing recognition among researchers and theorists about the importance of social motivational processes and interpersonal relationships for students' learning and achievement (Caemmerer & Keith, 2015; Marchand & Skinner, 2007). Notable research in the field of motivation has shown the significant impact of aspects of social motivation: the role of social skill (Cooper et al., 2014; Meier et al., 2006; Miles & Stipek, 2006) and social goal orientation (Kiefer & Ryan, 2008; Kiefer & Shim, 2016) on students' behavior, motivation, and achievement in school.

With respect to motivation at school, students' efforts in their social relationships: social skill (Magelinskaitė-Legkauskienė et al., 2016; Meier et al., 2006) and social goals endorsed in their social interaction in the classroom (Kiefer & Ryan, 2008) lead them to have active engagement in classroom learning activities, which enhances academic achievement. Moreover, many academic tasks may not be inherently interesting but rather challenging for students. In such situations, pursuing socially valued and appropriate behaviors or striving to achieve social goals within peer and teacher relationships can serve as an adaptive and alternative source of motivation that enables students to overcome challenges and enhance their learning (Dowson & McInerney, 2001, 2003).

Considering the findings and suggestions of (Magelinskaitė-Legkauskienė et al., 2016; Meier et al., 2006), the study attempted to examine the role of motivational orientations (social skill and social goal orientation) as determinants of students' mathematics achievement. Thus, the research explains students' motivational orientation in terms of social skill and social goal orientation as predictor variables. In support of this view, Dowson and McInerney (2001) stated that the importance of investigating social behavior in academic settings is underscored by the perspective that learning does not occur in a social vacuum. It leads students to actively engage in classroom learning activities and enables them to easily support each other, which enhances their learning and achievement.

Accordingly, social skills are one of the constructs that were included in the study that may explain students' mathematics achievement. As described by Miles and Stipek (2006), students' social skills are an important set of specific learned behaviors that promote positive interactions with others in their environment, and they seem to promote or hinder students' learning and achievement. Besides, Ladd et al. (2006) explained that students who have excellent social skills easily adopt the student role, better participate in classroom activities, cooperate with peers, share and receive compliments, and have better academic achievement. In view of that, this research addressed students' social skills grounded on Eslami et al. (2014) version of the social skill scale, which explains social skill in terms of four core domains: cooperation, assertion, empathy, and self-control behavior.

Considerable research has also documented meaningful and predictive relationships between students' social skills and academic achievement (Gresham, 2016).

It has been documented that students who have positive interactions and relationships with their peers are more academically engaged and have higher levels of academic achievement (Cooper et al., 2014; DiPerna et al., 2005; Elliott et al., 2001). To illustrate the relationship between social skills and academic outcomes, Malecki and Elliot (2002) conducted a study and found that social skills positively predicted current and future standardized academic achievement, whereas problematic behaviors negatively predicted current standardized academic achievement.

More importantly, although evidence of a positive relationship between students' social skills and academic achievement comes from various research findings, investigations on the longitudinal effects of social skills on academic achievement have also reported mixed or inconsistent results (Gustavsen, 2017). Gustavsen (2017) explains that some studies have reported a significant positive relationship between social skills and academic achievement (Caprara *et al.*, 2000; Jennings & DiPrete, 2010; Konold *et al.*, 2010), whereas others have found that social skills are not a strong predictor of later academic achievement (Claessens, Duncan, & Engel, 2009). On the other hand, Caemmerer and Keith (2015) suggest that social skills may indirectly influence academic achievement. Thus, the research attempted to explain the process in which how social skills influence students' mathematics achievement in addition to their direct contribution to mathematics achievement.

The role of students' social skills, as it stands, with its unique motivational role in explaining students' mathematics achievement, and social goal orientation in the classroom, is the second construct that was included in the study. Conceptually, social-goal orientation concerns the purpose and meaning that students ascribe to their social

behavior in the classroom (Kiefer & Shim, 2016; Ryan & Patrick, 2001). In an academic context, social goals may actually be more salient and predictive of students' global motivation and achievement than either mastery or performance goals, or may be better able to predict students' achievement in the classroom over more academically focused goals (Dowson & McInerney, 2003; Guan et al., 2006).

Researchers examining students' social goals in classrooms reported at least two different types of social goals associated with students' academic achievement: social intimacy goal and social status goal orientations (Ryan & Patrick, 2001). Social intimacy-goal concerns for establishing closer peer relationships characterized by mutual support and disclosure of thoughts and feelings. In contrast, a social status-goal concerns the desire for social visibility and prestige within the larger peer group (Patrick et al., 2002). They identified that these social goal orientations are the most prevalent social goals among the early adolescence period and have their own impact on students' motivation, behavior, and relationship with their peers as well as achievement (Kiefer & Ryan, 2008; Kiefer & Shim, 2016). Accordingly, the research attempted to explain students' social goal orientation in terms of social intimacy and social status goal orientation.

In this regard, Kiefer and Ryan (2008) conducted a study to examine the role of social goals (dominance, intimacy, and popularity goals) on students' engagement and academic achievement among grade sixth and seventh students. The result among overall population implies that popularity goal had a significant negative correlation with academic achievement (GPA) ($r = -0.09$, $p < .05$). Conversely, intimacy goal had a significant positive correlation with academic achievement (GPA) ($r = 0.12$, $p < .01$).

The finding indicates that popularity goal has negative implication whereas intimacy goal has positive implication for students' engagement and achievement in school.

Evidence of a positive relationship between social goals and academic performance shows that social goals are highly relevant to students' motivation at school; students often place just as much (or even more) emphasis on social goals as they do on academic goals (Guan et al., 2006; Kiefer & Shim, 2016). Particularly, middle school students' pursuit of social goals with peers has been related to classroom effort as well as to indicators of academic achievement such as grades and test scores (Patrick et al., 2002). Thus, students' social goals that strive in their interpersonal relationships with their peers are likely critically important for engagement and achievement in school (Covington, 2000; Guan et al., 2006; Kiefer & Shim, 2016). However, so far, the implications of social goals for students' motivation and achievement in school have received less attention.

Importantly, although previous researches, to some extent, provide salient information regarding the role of students' social skill (e.g., Cooper et al., 2014; Gustavsen, 2017; Malecki & Elliot, 2002) and social goal orientation (e.g., Dowson & McInerney, 2003; Guan et al., 2006; Kiefer & Ryan, 2008) on their academic achievement, those previous investigations did not clearly show how these constructs influence academic achievement. Thus, the process by which social skill (Caemmerer & Keith, 2015) and social goal orientation (Kiefer & Shim, 2016) promote academic achievement remains unclear. In contrast, researchers suggested that social skill (Caemmerer & Keith, 2015) and social goal orientation (Kiefer & Shim, 2016; Patrick et

al., 2011) indirectly influence academic achievement by allowing students to work more successfully with peers, ask questions, and attend to the classroom environment.

Consequently, the research attempted to explain how students' social skills and social goal orientation influence their mathematics achievement. Thus, the research proposed that dimensions of help-seeking constructs (attitude towards help-seeking and academic help-seeking behavior) may represent one of the key potential mechanisms that underlie the relationship between social skill and social goal orientation with academic achievement. In support of this hypothesis, Newman (2002) & Marchand and Skinner (2007) indicated that the social climate of the classroom and relationships with peers are important to understand students' attitude towards help-seeking and academic help-seeking behavior.

In this regard, students' academic help-seeking behavior is one of the constructs that the research considered, which might explain the relation between students' social skills and social goal orientation with their mathematics achievement. The concept of academic help-seeking behavior is primarily guided by a perspective in which it is a behavioral self-regulated learning strategy that enables students to effectively resolve their academic challenges (Karabenick, 2003, 2004). Over the last two decades, various researchers have shown that academic help-seeking behavior is an adaptive learning strategy that is directly related to students' learning and achievement (Martin-Arbo et al., 2021; Schenke et al., 2015).

However, accumulated evidence indicates that students' academic help-seeking behavior is a complex process that is influenced by various motivational factors (Fong et al., 2021). Since help-seeking behavior is an inherently social process, social features of

the learning context are probably more relevant to explain students' help-seeking behavior (Kiefer & Shim, 2016). Students who are better able to interact with others have more resources to benefit from the learning environment compared to students who struggle to cooperate with peers (Marchand & Skinner, 2007; Newman, 2000; Shim et al., 2013).

Specifically, students' social skills (Caemmerer & Keith, 2015; DiPerna et al., 2002) and social goal orientation (Kiefer & Shim, 2016; Patrick et al., 2011) determine their level of collaboration or help-seeking behavior, and this in turn, results in learning and achievement. These implied that students' social skills and social goal orientation might operate through academic help-seeking behavior to influence their academic achievement. Thus, it is plausible that students' academic help-seeking behavior might better explain the nature of the relation between social skill and social goal orientation with mathematics achievement.

Finally, to have a comprehensive understanding of how social skills and social goal orientation predict students' academic achievement, the research included the role of students' attitude towards help-seeking. Attitude towards help seeking denotes the perceived notion of costs and benefits related to help seeking in the context of learning (Skaalvik & Skaalvik, 2005; Tanaka et al., 2002). Pajares et al. (2004) stated that the perceived benefits of help seeking represent students' positive attitude towards seeking help on a task. Whereas, perceived costs of seeking help represent students' negative perceptions about seeking help from their peers. They indicated that students' attitude towards help-seeking is critically important in explaining their level of engagement in

classroom activities, and academic help-seeking behavior as well as achievement (Roussel et al., 2011).

Despite the demonstrated role of attitude towards help seeking, Newman (2000) & Chowdhury and Halder (2019) argued that students' social behavior influences their level of collaboration, attitude towards help-seeking, and academic help-seeking behavior in the classroom. This might imply that social skills and types of social goals that students pursue are antecedents of students' attitude towards help-seeking on academic achievement. Thus, attitude towards help seeking may represent another mechanism that underlies the relationship between social skill and social goal orientation with academic achievement.

More interestingly, although students' relationships with their peers guide their attitude towards help seeking from their peers (Marchand & Skinner, 2007; Newman, 2000), their attitude towards the benefit or cost of seeking help determines their academic help-seeking behavior (Huet et al., 2011; Skaalvik & Skaalvik, 2005). On the other hand, researchers such as Fong et al. (2023) and Schenke et al. (2015) stated that students' academic help-seeking behavior is a behavioral self-regulated learning strategy that is more directly related to their learning and academic achievement. As a result, the above empirical evidence might imply that students' academic help-seeking behavior might be an intermediate in the causal sequence relating social skill and social goal orientation with attitude towards help seeking and academic achievement, which might explain how these constructs sequentially influence students' academic achievement.

In summary, the interplay of social skills, social goal orientations, attitude towards help seeking, and academic help-seeking behavior might influence students'

learning and achievement. A deeper examination of the means by which these constructs interact to enhance students' mathematics achievement is informative in supporting students and developing intervention strategies. Therefore, the study allowed for providing insights into the role of attitude towards help seeking and academic help seeking behavior in explaining the relation between students' social skills and social goal orientation with their mathematics achievement among primary schools of Grade 8 students. In line with this, the study focused on examining the mediating role of attitude towards help seeking and academic help seeking behavior in the relation between students' social skills and social goal orientation with mathematics achievement.

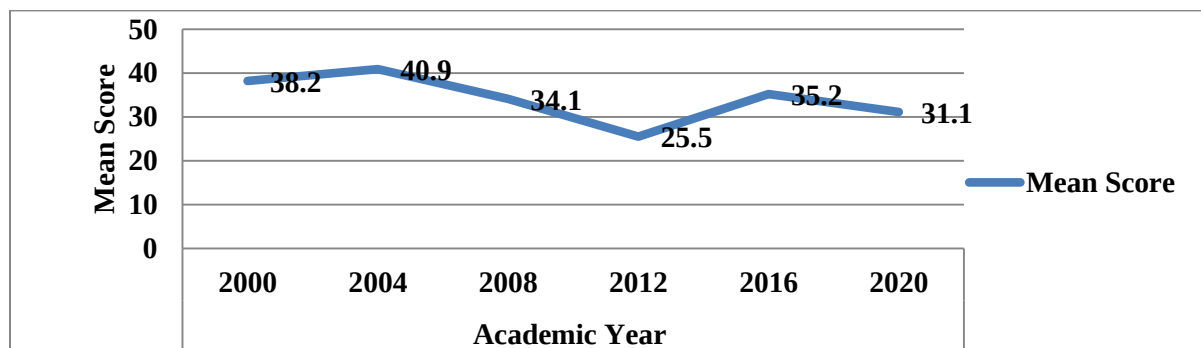
1.2. Statement of the Problem

Students are the most essential asset for any educational institute, and their academic achievement is an important indicator of their learning, understanding, and competencies (Tran & Nguyen, 2021). Thus, as far as research in academic contexts goes, academic achievement is one of the phenomena that have occupied the minds of many educators, in general, and specialists in educational psychology in particular (Algharaibeh, 2020; Ozcan, 2021). Moreover, from its relevance to diverse fields of study, achievement in mathematics and science has a significant impact on students' learning and career paths (Deringöl, 2018; Tran & Nguyen, 2021). However, Brezavšček et al. (2020) explain that it is an open fact that quite in a large number of students perform poorly in mathematics across different levels of education in various countries. They do not have sufficient knowledge and competence that conforms to their grade level, especially in mathematics and science subjects.

Nowadays, mathematics and factors influencing students' achievement or failure in it have been a basic issue in education. Despite the extensive line of research conducted and heavy budgets spent, there are still huge numbers of students who experience failure in mathematics each year (Brezavšček et al., 2020; Eng et al., 2010). Moreover, although mathematics is introduced as early as the primary school level, a large number of students still have problems in solving basic mathematics questions when they progress with grade levels (Deringöl, 2018). The students' low achievement in mathematics is not only a concern for particular countries but has become a worldwide concern over several years. The performance of students in mathematics from primary to higher levels of education is still a major concern (Abalde & Oco, 2023; Brezavšček et al., 2020).

In the Ethiopian context, the Ethiopian National Learning Assessment was launched in 1999/2000 by the Ministry of Education (MoE) to assess students' mathematics achievement. Since that time, the assessment has been conducted every four years. The main objective of the national learning assessment was to determine students' performance level at both Grades 4 and 8 in four key academic subject areas. The result of the Ethiopian national learning assessment exclusively on the Mathematics subject among Grade 8 students revealed that students' average score was less than the minimum expected score (50%) in consecutive years of assessment (2000 - 2020) (NEAEA, 2020). Students' mathematics average score for six consecutive years of assessment (2000-2020) was between 31.1 and 40.9, which is below the mean value (see figure 1) (NEAEA, 2020). The national survey clearly indicates that there is a critical problem among Grade 8 students' mathematics achievement at the national level.

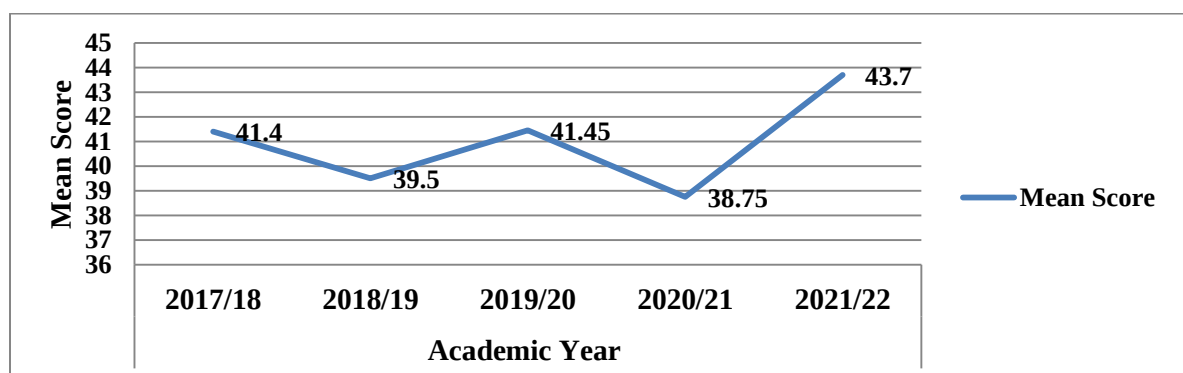
Figure 1: Mathematics Achievement among Grade 8 Students, National level (2000-2020)



Source: *Ethiopian Sixth National Learning Assessment, 2020*

Specifically, in the study area of Dessie city administration, the assessment of the last five years' regional exam indicated that students' average score was less than the minimum expected score of 50 on the subject of mathematics. Students' average scores were between 38.75 to 43.7. This clearly indicates that students' mathematics underachievement is still a critical problem in the study area that needs serious attention with the intention of enhancing their mathematics achievement (see Figure 2). Therefore, it is important to consider factors that influence students' mathematics achievement to improve their learning and achievement.

Figure 2: Mathematics Achievements of Grade 8 Students (2017/18 – 2021/22) in Dessie



Source: *Dessie city education office, 2022/23*

Indeed, one of the most pressing concerns among educators is the presence of a large number of students with mathematics achievement below the expected level. On the contrary, prior investigations have recognized that given the social nature of learning and school environment, students' social skill (Cooper et al., 2014; Elliott et al., 2001; Meier et al., 2006) and social goal orientation (Dowson & McInerney, 2003; Kiefer & Shim, 2016) are adaptive, alternative motivational orientations towards their engagement and achievement. They allow students to cooperate with their peers and comply with classroom norms (to pay attention and participate), which could sustain attention and efforts that enhance learning and achievement (Marchand & Skinner, 2007; Patrick et al., 2011). That is, considerable attention has been paid to students' academic motivation and goals to explain their motivation, learning, and achievement (Guan et al., 2006; Kiefer & Shim, 2016). However, the sole use of academic motivational factors might oversimplify the complexity of student motivation and academic achievement (Guan et al., 2006; Marchand & Skinner, 2007).

Moreover, the strong associations between the academic and the social dimensions of school are reflected in researchers' arguments that these dimensions are almost inextricable, which means cognitive processes and social relations are so intricately interwoven in learning at school that it is difficult to separate them (Patrick et al., 2011; Wentzel, 2000). Above all, while there is growing awareness on the importance of examining and understanding the role of students' social skill (Cooper et al., 2014; Gresham, 2016) and social goal orientation (Kiefer & Ryan, 2008; Kiefer & Shim, 2016) on learning and achievement, currently, little is known about the role of those factors on academic achievement, particularly in the primary school context. As a result, the

existing literature might be incomplete without a clear understanding of the role of these constructs on mathematics achievement.

Importantly, although prior investigation suggested that social skills (Caemmerer & Keith, 2015; DiPerna et al., 2002) and social goal orientation (Kiefer & Shim, 2016) indirectly influence students' academic achievement, the literature is limited in identifying the process or mechanisms through which these constructs interact to predict academic achievement. On the other hand, some research has also evaluated the importance of social skills and social goal orientation in explaining students' attitude towards help-seeking and academic help-seeking behavior in various ways (Kiefer & Shim, 2016; Newman, 2000). Still, little research has established the nature of the relation between these constructs to enhance students' mathematics achievement.

Moreover, even though existing research to some extent explains that students' social skill (DiPerna et al., 2002; Lane et al., 2004) and social goal orientation (Kiefer & Shim, 2016; Shim et al., 2013) are important to explain the behaviors necessary for academic achievement such as academic help seeking behavior and attitude towards help seeking, existing research that focuses on simple relationship among these constructs don't clearly indicate the intervening variables among the relation between social skill and social goal orientation with academic achievement (Caemmerer & Keith, 2015). This implies the need for further study on how academic help-seeking behavior and attitude towards help-seeking may serve as mediators of social skills and social goal orientation on academic achievement.

Conceptually, academic help-seeking behavior is an important self-regulatory strategy highly associated with academic achievement (Fong et al., 2021; Karabenick,

2003, 2004). However, academic help seeking combines aspects of cognitive and social engagement, and it is a multifaceted process that requires the use of motivational competencies and beliefs (Marchand & Skinner, 2007; Shim et al., 2013). Specifically, since academic help-seeking behavior needs social interaction among students, their social skills (Newman, 2000; Smalley & Hopkins, 2020) and social goal orientation (Kiefer & Shim, 2016; Ryan & Patrick, 2001) are critical to explain their academic help-seeking behavior. Moreover, students' attitude towards help-seeking plays a pivotal role with the intention of understanding their academic help-seeking behavior (Patrick et al., 2011; Tanaka et al., 2002). However, previous research doesn't clearly show the nature of the relationship among these constructs. Thus, comprehensive efforts are necessary to determine the causal sequence between these constructs to enhance students' mathematics achievement.

In addition, the researcher's personal experiences point out that students do not take an active role in their own learning, particularly in learning mathematics. In the classroom, most of the students are seemingly passive learners who neither enjoy challenges nor take the initiative required to overcome academic adversity. They do not actively support each other to solve their academic difficulties. In contrast, in relation to motivation at school, students' social skills (Lane et al., 2004; Wentzel & Watkins, 2002) and social goal orientation (Dowson & McInerney, 2003) are associated with students' collaboration with their peers, attitude, and academic help-seeking behavior as well as learning and achievement. This asserts that conducting comprehensive research is needed in order to have an inclusive understanding that enhances students' motivation and achievement.

So far, various research studies have been conducted in Ethiopia that aimed exclusively to enhance students' mathematics achievement. Most of the previous research includes family background factors, students' personal characteristics, teachers' related variables, curriculum issues, and school-related factors to explain students' mathematics achievement. They revealed that these variables have meaningful contributions to students' mathematics achievement (Effa, 2020). However, in Ethiopia, there is still a lack of research findings that show the role of students' social skills and social goal orientation on mathematics achievement, and the mediating role of academic help-seeking behavior and attitude towards help-seeking in the relation between these constructs.

In sum, although the literature provides little evidence on the role of social skill and social goal orientation to explain students' academic help seeking behavior and attitude towards help seeking as well as learning and achievement (Marchand & Skinner, 2007; Newman, 2000; Shim et al., 2013); and suggests that social skill (Caemmerer & Keith, 2015; DiPerna et al., 2002) and social goal orientation (Kiefer & Shim, 2016; Patrick et al., 2011) may indirectly predict academic achievement, conversely, yet, to the best of my knowledge, limited studies exist on the relationship between these constructs to boosted students' academic achievement. The existing literature doesn't adequately explain how social skills and social goal orientation interact to predict academic achievement via attitude towards help seeking and help seeking behavior.

As a result, to fill gaps in the literature, the study attempted to investigate how students' social skills and social goal orientation contributed to their mathematics achievement. Therefore, the research was aimed at realizing the mediating role of

students' attitude towards help seeking and academic help seeking behavior in explaining the relation between social skill and social goal orientation with mathematics achievement among primary schools of Grade 8 students.

1.3. Objective of the Study

The main objective of the study was to examine the mediating role of dimensions of help-seeking constructs (attitude towards help seeking and academic help-seeking behavior) in explaining the relationship between students' motivational orientation (social skill and social goal orientation) with mathematics achievement among primary schools of Grade 8 students. More specifically, the research had the following specific objectives:

1. To assess the relationships between students' social skills (cooperation, assertion, empathy, & self-control behavior) with attitudes towards help-seeking (cost of help seeking & benefit of help seeking), academic help-seeking behavior (instrumental help-seeking, executive help-seeking, & avoidance help-seeking), and mathematics achievement.
2. To assess the relationships between students' social-goal orientation (social intimacy goal & social status goal) with attitudes towards help-seeking (cost of help-seeking & benefit of help-seeking), academic help-seeking behavior (instrumental help-seeking, executive help-seeking, & avoidance help-seeking), and mathematics achievement.
3. To assess the role of students' social skills, social goal orientation, attitude towards help-seeking, and academic help-seeking behavior on mathematics achievement.

4. To examine the role of students' social skills, social goal orientation, and attitude towards help-seeking on their academic help-seeking behavior.
5. To examine the role of students' social skills and social goal orientation on their attitude towards help-seeking.
6. To examine the mediating role of students' academic help-seeking behavior in the relationship between students' social skills and social goal orientation with their mathematics achievement.
7. To examine the mediating role of students' attitude towards help-seeking in the relationship between students' social skills and social goal orientation with their mathematics achievement.
8. To examine the sequential mediating role of students' attitude towards help-seeking and academic help-seeking behavior in the relationship between students' social skills and social goal orientation with their mathematics achievement.

1.4. Research Questions

In line with the objectives of the study, the research attempted to address the following research questions:

1. Are there a significant relationship between students' social skills (cooperation, assertion, empathy, & self-control behavior) with attitudes towards help-seeking (cost of help seeking & benefit of help seeking), academic help-seeking behavior (instrumental help-seeking, executive help-seeking, & avoidance help-seeking), and mathematics achievement?
2. Are there a significant relationship between students' social-goal orientation (social intimacy goal & social status goal) with attitudes towards help-seeking

(cost of help seeking & benefit of help seeking), academic help-seeking behavior (instrumental help-seeking, executive help-seeking, & avoidance help-seeking), and mathematics achievement?

3. Do students' social skills, social goal orientation, academic help-seeking behavior, and attitude towards help-seeking have an independent contribution to mathematics achievement?
4. Do students' social skills, social goal orientation, and attitude towards help-seeking have an independent contribution to academic help-seeking behavior?
5. Do students' social skills and social goal orientation have an independent contribution to attitude towards help-seeking?
6. Does students' academic help-seeking behavior mediate the relation between students' social skills and social goal orientation with their mathematics achievement?
7. Does students' attitude towards help-seeking mediate the relation between students' social skills and social goal orientation with their academic help-seeking behavior?
8. Does students' attitude towards help-seeking and academic help-seeking behavior have a serial mediating role in the relationship between students' social skills and social goal orientation with their mathematics achievement?

1.5. Significance of the Study

1.5.1. Practical Significance

The findings of this study hold several practical implications for educators, school administrators, and students. First, the results offer empirical evidence highlighting the

critical role of social skills and social goal orientation in improving students' mathematics achievement. This insight equips school administrators and classroom teachers with a stronger rationale for integrating social-emotional learning components into mathematics instruction. Second, by identifying students' academic help-seeking behavior and attitudes toward help-seeking as key mediators, the study provides a concrete, actionable pathway through which social motivational processes can enhance academic achievement. Teachers can use this understanding to foster classroom environments that normalize and encourage adaptive help-seeking practices.

Furthermore, the study informs intervention design by clarifying that integrated approaches are most effective in enhancing achievement in mathematics. This guidance supports resource-efficient decision-making in schools. On a student level, the results can empower students to develop a positive attitude toward asking for help, realizing that seeking academic support is a constructive learning strategy rather than a sign of weakness. This shift in attitude can lead to greater engagement and persistence in mathematics learning.

Finally, by establishing this unique mediating pathway, the research encourages other researchers to conduct further investigation in this specific area. This includes replication studies across different contexts and populations, as well as extensions that explore the causal ordering or potential moderators of the observed relationships. This ensures the continuous refinement of theoretical models in educational psychology.

1.5.2. Theoretical Significance

The result of the study may enable us to have clarity on the triadic reciprocity of Bandura's social cognitive theory (Zimmerman, 1989b) that shows interaction between

personal, behavioral, and environmental domains. In the social cognitive perspective, students' academic achievement results from continuous, reciprocal interactions among behavior, the external environment, and cognitive and other internal events (Zimmerman, 1995). Thus, the research attempted to explain the nature of the relationship between social skill, social goal orientation, attitude towards help seeking, and academic help-seeking behavior with students' mathematics achievement in line with social cognitive theory.

1.6. Delimitation of the study

The study was delimited in terms of area, population, and its topic. Accordingly, the study was conducted in Dessie City Administration among selected general primary schools that are found in South Wollo Zone, Amhara National Regional State. This is because the researcher had primary school teaching experience there, which enabled the researcher to have an overview understanding on the study area school environment, students' behavior, and achievement, which might be a basis for conducting this research. Moreover, the researcher's place of work is there, and the researcher might participate in the future intervention process to enhance students' mathematics achievement.

In addition, this study exclusively focused on Grade 8 students, who registered for the 2023/24 academic year, among the given Grade level will be considered as participants of the study. Moreover, the study exclusively examines the nature of the relationship among motivational orientation (social skill and social goal orientation), attitude towards help-seeking and academic help-seeking behavior with mathematics achievement among Grade 8 students. More specifically, the research focused on understanding the parallel and sequential mediating role of attitude towards help-seeking

and academic help-seeking behavior in the relation between students' social skills and social goal orientation with their mathematics achievement.

1.7. Definition of Key Terms

This section explains basic terms that were used in this study, which allows for have better understanding of the issues addressed by the study.

Academic Help-Seeking Behavior: It shows students' help-seeking behavior from their peers in order to solve their learning difficulties, which aren't solved independently in the context of learning mathematics, which is measured in terms of avoidance, executive, and instrumental help-seeking behavior.

Avoidance Help-Seeking: It shows students' tendency not to ask for help when it is needed to solve their learning difficulties.

Executive Help-Seeking: It shows students' interest in obtaining ready-made answers rather than trying to solve the problem on their own.

Instrumental Help-Seeking: It shows students' tendency to ask for appropriate or limited help when needed that enabling them to solve the problem by themselves.

Attitude towards Help-Seeking: It indicated students' perceptions toward seeking help from their peers to solve learning difficulties, which depends on whether they recognize that help seeking is a useful strategy that promotes learning or not, which is measured in terms of the benefits of help-seeking and costs of help-seeking.

Benefits of Help-Seeking: reflects students' recognition that help-seeking is a useful strategy that promotes their learning, which encourages students more likely to seek help since they believe that doing so will allow them to solve the problem or to learn.

Costs of Help-Seeking: It refers to the students' perceptions of the negative consequences of seeking help, which prevent students from seeking help due to concerns that the negative outcomes of seeking help may outweigh the benefits.

Mathematics Achievement: It is defined as students' level of performance in mathematics subjects within the grade level in the specified academic year, which was assessed by the classroom teacher through continuous assessment techniques.

Social Goal Orientation: It shows students' purpose or intention in their social interaction in the classroom context, which is explained in terms of social intimacy goal and social status goal orientation.

Social Intimacy Goal Orientation: It shows students' concern to establish intimate peer relationships, which is characterized by mutual support and disclosure of thoughts and feelings with their peers in the classroom.

Social Status Goal Orientation: It shows students' desire for social visibility and prestige among peers, which is explained through maintaining a personal public image in the classroom.

Social Skills: are the actual behaviors that students perform that enable them to interact with their peers in the school context, which are explained in terms of assertiveness, cooperation, empathy, and self-control behaviors.

Assertion Behavior: It shows students' behaviors that reflect in terms of initiating behaviors such as asking others for information, introducing oneself, and responding to the actions of others.

Cooperation Behavior: It shows students' behaviors that reflect in terms of helping others, sharing, and complying with rules and directions.

Empathy Behavior: It shows students' behaviors that reflect concern and respect for others' feelings and viewpoints.

Self-Control Behavior: It shows students' behaviors that emerge in conflict situations and in non-conflict situations that require taking turns and compromising.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The research attempted to understand the mediating role of students' attitude towards help seeking and academic help seeking behavior in the relationship between students' social skills and social goal orientation with their mathematics achievement. Thus, the literature reviews contained segments about predictor variables (social skill and social goal orientation) and mediator variables (attitude towards help-seeking and academic help-seeking behavior) independently as separate constructs. Moreover, the empirical reviews also assessed the available evidence that supports the relationship between predictor variables with mediators and the criterion variable. Consequently, this chapter provides an insight into understanding inter-correlation among the variables of the study. Finally, the chapter was concluded with a summary of basic issues of literature review on the focus area of the research.

2.1.Theoretical Literature Review

2.1.1. Concept of Social Skill as a Behavioral Construct

There are several conceptualizations in the literature reflecting social skill as a construct. In a seminal theoretical review of the concept of social skill, McFall (1982); as cited in Gresham (1986) identified two general approaches that have been taken in conceptualizing social skill: (1) the trait model, which views social skills as an underlying, cross-situational response predisposition and (2) a molecular model, which views social skills as discrete, situation-specific behaviors with no reference to an underlying personality characteristic or trait. McFall (1982) takes both models to task in his review of the social skills concept. However, the trait model is amorphous, highly

abstract, and has little empirical data to support its adequacy as a trait. The molecular model, on the other hand, tries to correct the abstract, unobservable nature of the trait approach by providing operationally defined responses in specific situations.

Accordingly, it is important to distinguish between behavioral constructs and the more trait-oriented approaches to social skills. Behavioral constructs (e.g., social skills) are tied to observable behavior, which have clear behavioral referents within specific situations (McFall, 1982). Whereas Trait-like conceptualizations of social behavior view social skillfulness as a hypothetical construct referring to a global, underlying personality characteristic or response predisposition that is not situation specific but generic in nature. Within the molecular model, social skills are defined as discrete, situation-specific, and observable units of behavior unrelated to an underlying personality trait (McFall, 1982).

In this view, Gresham (1986) conceptualized social skill as a behavioral construct in the sense that specific categories of social behavior are often summarized into a global entity and are labeled "social skill". He further clarifies that several definitions of social skills have arisen during the past several years. For example, Combs and Slaby (1977) define social skills as the ability to interact with others in a given social context in specific ways that are socially acceptable or valued and at the same time are personally beneficial, mutually beneficial, or beneficial primarily to others. Pursuing a more operant definition, Libet and Lewinsohn (1973) define social skills as the complex ability both to emit behaviors that are positively or negatively reinforced and not to emit behaviors that are punished or extinguished by others. Furthermore, Foster and Ritchey (1979) have defined social skill as those responses, within a given situation, that prove effective, or in

other words, maximize the probability of producing, maintaining, or enhancing positive effects for the interaction.

Consequently, even if social skills have been defined in a variety of ways, one of the most comprehensive definitions is provided by Schumaker and Hazel (1984) they explain that social skill is any cognitive function or overt behaviors in which an individual engages while interacting with another person or persons. Cognitive functions include such capacities as empathizing with or understanding another person's feelings, and discriminating and evaluating consequences for social behavior. Overt behaviors include the nonverbal (e.g., head nods, eye contact, facial expression) and verbal (e.g., what the person says) components of a social performance.

Altogether, all of the preceding definitions provide a "ballpark" notion of what social skills are; however, this research basis on Gresham and Elliot, (1990) conceptualization of social skill. They explain that social skills are considered fundamental factors for relationship formation, or the quality of social interactions. They defined students' social skills as an important set of specific learned behaviors that promote positive interactions with others in their classroom are manifested in actions, and it is operationalize in terms of students rated social skills in four domains: (1) cooperation - sharing idea, and abiding by the rules; (2) assertion - initiating behaviors, asking for things, and responding to behaviors of others; (3) empathy - showing concern for the feelings of others; and (4) self-control - the ability to respond appropriately to conflict or corrective feedback from other SSRS-C: (Gresham & Elliott, 1990; as cited in Gresham et al., 2006).

Accordingly, Gresham et al. (2006) asserted that Social skills represent a set of competencies that (1) facilitate initiating and maintaining positive social relationships, (2) contribute to peers' acceptance and friendship development, (3) result in satisfactory school adjustment, and (4) allow individuals to cope with and adapt to the demands of the social environment. In this view, although behaving in socially appropriate and responsible ways is valued in its own right, these aspects of social competence also have an impact on students' academic performance.

Altogether, while the precise nature of relations between students' social skills and academic achievements is not well understood, there are several reasons why behaving in socially appropriate and responsible ways might be related to intellectual outcomes at school. First, social skills might be related to intellectual achievements because it is also related to other, more academically relevant types of behavior that contribute directly to learning and performance. Second, it is possible that social skill directly influences students' academic achievement (Wentzel, 1999). Thus, the empirical reviews focus on these two aspects that show their direct and indirect role in academic achievement.

2.1.2. Concept of Social Goal Orientation

The construct of goals has a long history in psychological research. Goals are cognitive representations of things individuals want to accomplish. Goals were defined as those things that an individual would like to achieve or accomplish in a given situation (Urduan & Maehr, 1995). Various literature examines how goals regulate and direct behaviors; they explain that goals required by individuals give purpose and direction to actions and provide a framework for interpreting and responding to events. They are

associated closely with behaviors such that they motivate individuals and guide behaviors as a means to reach the desired state that is set in goals (Anderman, 1999; Dowson & McInerney, 2001, 2003).

Moreover, Urdan and Maehr (1995) explain that students may perceive a broad variety of reasons for trying to succeed academically. These different perceived reasons for trying to succeed academically can all be thought of as goals that students pursue in achievement situations, and these different goals can affect students' cognitions, behaviors, and motivation in different ways. Out of this broad variety, students may have a number of social goals or purposes that students may perceive as reasons for engaging in academic work. However, theories of motivation have generally given scant attention to the influence of social goal orientation on students' academic achievement and motivation. Achievement goal theorists have typically ignored the role of social goals in an academic setting.

In the present study, students' goal was studied in terms of social goal orientation. Social goals are generally defined as the social outcomes that individuals want to either achieve or avoid (Jarvinen & Nicholls, 1996). With respect to motivation at school, a focus on what students are trying to accomplish in the classroom in contrast to academic goal orientations that focus on why students try to achieve academically (Urdan & Maehr, 1995). Social-goal orientation concerns purpose and meaning that students ascribe to their social behavior in the classroom. They assert that social goals may actually be more salient and predictive of students' global motivation and achievement than either mastery or performance goals or may be better able to predict

students' achievement in the classroom over more academically focused goals (Dowson & McInerney, 2001, 2003).

Ryan and Patrick (2001) explain that several social goals have been discussed and examined, including being pro-social and responsible (Wentzel, 1996), forming peer relationships, having high social status (Hicks, 1996), gaining social approval, and bringing honor to the family (Urdan & Maehr, 1995). These various goal orientations concern various types of alliances students have with their peers, motivation, and social reasons for wanting to achieve academically. Incorporating a social goals framework might be a bridging strategy that could produce greater understanding about students' interaction, engagement in classroom activities, and collaboration with their peers. They might have important implications for understanding students' motivation, behavior, and achievement in school (Ryan & Patrick, 2001).

However, this study considered two aspects of social goal orientation in order to explain students' social goals in their peer relationships. In line with this, Urdan and Maehr (1995) & Hicks, 1997; as cited in Ryan and Patrick (2001), postulated two aspects of social-goal orientations, which are indicators of early adolescents' social behavior: social intimacy and social status-goal orientation. These goal orientations concern two types of alliances students have with their peers that may influence their learning and achievement. Given their important role in peer interactions, both social intimacy and status are often highly desired and actively pursued by adolescents. The empirical reviews were focused on the role of students' social goals endorsed on academic achievement and how these goals enhance their learning and achievement.

2.1.3. Dimensions of Social Goal Orientation

2.1.3.1. Intimacy Goals Orientation

Intimacy goals refer to a focus on establishing intimate peer relationships characterized by mutual support and disclosure of thoughts and feelings. It explains students' goals for creating and sustaining close friendships and including the desire for intimacy, trust, and sharing. As a whole, it focuses on both general acceptance and on closer interpersonal relationships. Intimacy goals are positively associated with adaptive types of help-seeking, pro-social behavior, engagement, and achievement (Anderman, 1999; Jarvinen & Nicholls, 1996; Ryan & Patrick, 2001). Students striving for intimacy may actively seek out opportunities to exchange ideas with peers around academic tasks, build a sense of camaraderie, and develop supportive social relationships, and thus may not view help-seeking as a threat to one's self-worth (Ryan et al., 1997).

2.1.3.2. Status-Goal Orientation

Social status goals concern a desire for social visibility and prestige within the peer group, as evidenced through affiliation with the "popular" group at school. A social status-goal orientation is related to the emergence of an elite social crowd, typically labeled "popular" (Anderman, 1999b; Hicks, 1997; Kinney, 1993; as cited in Ryan & Patrick, 2001). Accordingly, Ryan and Patrick (2001) further explain that status goals are similar to performance-goal orientation in that both concern maintaining a person's public image; performance-goal orientation concerns a student's image of academic ability, whereas status goals concern a student's image of social standing. In both cases, there may be a heightened awareness of the self-relative to others and a potential need to protect self-worth.

2.1.4. Conceptions of Academic Help-Seeking Behavior as a Construct

Most investigators have based their analyses of help-seeking on the values of Western individualistic cultures. Such analyses typically point out the inconsistency of help-seeking with the values of competitiveness, self-reliance, and independence that are characteristically emphasized in such cultures (Nelson-Le Gall, 1981). Indeed, help-seeking was often viewed as an index of dependence in the early studies of socialization and personality development. Thus, help-seeking has taken on connotations of immaturity, passivity, and even incompetence (e.g., Beller, 1955; Nelson-Le Gall, 1981; Van der Meij, 1988).

Early view about help seeking was changed once Nelson-Le Gall (1981) promoted instrumental help seeking as a form designed to gain knowledge and skills that promote understanding, achievement, and subsequent independence. Researchers such as Marchand and Skinner (2007) state that Nelson-Le Gall (1981) was the pioneer in studying help seeking from a social cognitive perspective and that the latter was later followed by Newman (1990). As a consequence, academic help seeking is now considered an important self-regulated learning (SRL) strategy that can alleviate difficulties students encounter when learning both in and out of the classroom, and is associated with adaptive motivation (Martin-Arbo et al., 2021; Schenke et al., 2015).

In academic settings, students may often run into challenges that require knowledge beyond their current level. It is almost inevitable that learners will occasionally judge themselves inadequate to master the increasingly complex demands placed on them. In these situations, students may seek assistance from outside sources, including teachers, peers, adults, and the like, in order to resolve their academic

difficulties (Fong et al., 2021; Karabenick, 2003). As a result of this, researchers have developed a line of research that examines the role of help seeking behavior on students' academic achievement (Fong et al., 2021; Schenke et al., 2015) and somewhat the mediating role of academic help seeking behavior on the relationship between students' social skill and social goal orientation with their academic achievement (Kiefer & Shim, 2016). Thus, the empirical reviews were focused on the direct and mediating role of help-seeking behavior on students' academic achievement. However, as a whole, from early times to now, there are two general perspectives on help-seeking behavior.

2.1.4.1.Help Seeking as Dependent

Help-seeking as a research topic received little scientific inquiry until the 1980's (Nelson-Le Gall, 1981). Initial discussions of help seeking focused primarily on the psychological aspects of seeking help in non-academic settings for social and personal issues (Nelson-Le Gall, 1985). Beller review notes that dominant social views in the United States during the early phases of help-seeking research valued independence, self-reliance, and hard work. As a result, help-seeking was seen as a dependent behavior and framed in the negative (Beller, 1955, 1957). In other words, help seeking was seen as an admission that the obstacle, or challenge, could not be overcome by one's own intellect or ability. This deficit approach dominated research on help seeking into the early 1980's (Nelson-Le Gall, 1985).

2.1.4.2.Help Seeking as Independent

The negative view of help seeking existed until the 1980s with the seminal works of Nelson-Le Gall (1981), which reframed help seeking as an activity where the help seeker is active in the process. Utilizing the learning theories of Piaget (1964) and

Vygotsky (1980), Nelson-Le Gall argued that help-seeking is a beneficial learning strategy for young students. Piaget (1964) theorizes that individuals learn by being exposed to conditions that create a dissonance between existing knowledge and new knowledge. In this theory, individuals must find a way to incorporate new knowledge into an existing frame of knowledge to reduce dissonance (Nelson-Le Gall, 1981).

On the other hand, Vygotsky's (1980) theories of learning discuss learning as a social action, whereas individuals learn from others before integrating knowledge. Therefore, when an individual encounters a learning challenge, the initial knowledge needed to overcome it comes from others. After the social interaction, the learner can then internalize knowledge in order to become more independent in future learning challenges. The construct of help-seeking can be found in both of these theories of learning. As an individual is exposed to new knowledge or situations, a dissonance is formed with existing knowledge. Then, the individual may seek ways to remedy this dissonance. In the case of help seeking, the individual will seek to resolve this dissonance by learning from others rather than from the independent self (Nelson-Le Gall, 1981).

Therefore, Nelson-Le Gall (1985) argued that an understanding of influential learning theories could be used to ground the view of help-seeking as a strategy of successful independent learners. The help-seeking individual was reframed as not having to rely on others to resolve a problem, but instead seen as utilizing others as a tool for problem-solving. This reframing moved research on help-seeking towards a positive achievement activity perspective. On the building of this concept, Ames and Lau (1982) were amongst the first to conceptualize help seeking as an achievement behavior involving the search for and employment of a strategy to obtain success. Since this

change in perspective, help-seeking research in academic settings has predominantly focused on help-seeking as a tool used by self-regulated learners to improve academic mastery and performance.

2.1.5. Dimensions of Academic Help-Seeking Behavior

Nelson-Le Gall (1981) challenged the early perspective of help-seeking behavior by asserting that help-seeking is an adaptive alternative to students' solving strategies. It is also an important self-regulatory strategy that contributes to student learning and achievement (Karabenick, 2003). However, researchers have argued that help seeking can take several forms that differ in the extent to which they promote learning and mastery, namely executive help seeking, instrumental help seeking, and help-seeking avoidance (Karabenick, 2003; Shim et al., 2013). Thus, these three constructs of help-seeking behavior clarify students' actual help-seeking behavior.

2.1.5.1. Instrumental Help-Seeking Behavior

Instrumental help-seeking refers to a situation where learners seek the minimum amount of information needed to perform the task on their own. For example, students ask for hints, but find the solution to the problem by themselves. This help-seeking strategy is adaptive for learning because the students are actively involved in the problem-solving, and the help merely serves as extra input for deep processing (Karabenick & Knapp, 1991). He further explains that this type of help seeking is a self-regulated and adaptive learning behavior because the individual seeks to gain the minimum assistance sufficient to achieve independently.

In line with this, various researchers explain that instrumental help seeking behavior has been characterized as a behavior directed toward the attainment of a

solution to challenging problems, and thus as continued task involvement. They also argued that instrumental or mastery-oriented help-seeking should be considered an achievement behavior (Karabenick, 2003). Moreover, when students engage in adaptive help seeking, or ask for hints or clues to complete the task by themselves, they are likely to have higher achievement than students with expedient or avoidant help seeking (Newman, 2000).

2.1.5.2.Executive Help-Seeking Behavior

Newman (2000) explains executive help seeking as being designed to decrease the cost of completing tasks by enlisting the aid of others. In this definition, executive help seeking is seen as a dependent behavior where the student relies solely on the helper to achieve a goal. For example, a student asking a peer for the answer to a difficult question on an assignment is exhibiting executive help seeking. Thus, in this type of help seeking behavior, the student does not attempt to learn the process for obtaining the answer, which could be used in future problem-solving. Research on early adolescents (Ryan et al., 2005) and college students (Karabenick, 2003) who need help focus only on getting the answer, without concern about understanding the content, and finishing the task quickly they are likely to have lower achievement than students with adaptive help seeking do.

2.1.5.3. Help Seeking Avoidance

Help-seeking avoidance refers to students who are aware that they need help, but do not seek it. This type of behavior prevents them from improving their learning (Karabenick & Knapp, 1991; Newman, 1990). Ryan and Patrick (2001) define help seeking avoidance as instances when students know that they need help but do not seek it.

They explain that avoiding help seeking strategies may be the result of a need for autonomy or a threat to competence. Further, avoiding help when needed is an act of disengagement from the learning process, which may hinder students' learning and performance evaluations (Ryan et al., 2005).

2.1.6. Concept of Attitude towards Help Seeking as a Construct

The concept of attitude finds its origin in the context of social psychology (Allport, 1935), in connection with the question of foreseeing an individual's choices in contexts like voting, buying goods, etc. (Eagly & Chaiken, 1993). Accordingly, the original definition of attitude by Gordon Allport (1935), as cited in Martino and Zan (2009), focuses on the effects of an individual's mental state on their behaviors within a particular situation. It was the most acceptable definition that has worked, since its first appearance in 1935, as a keystone in the structure of the concept of attitude. He defines attitude as a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to objects and situations with which it is related.

Moreover, Eagly and Chaiken (1993) also explain that an attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor. It is a predisposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation, or an attitude object. This definitional perspective has generated a number of conceptual models of the attitude concept. Historically, one of the most influential models of attitude has been the multi component model (Eagly & Chaiken, 1993). According to this perspective attitudes are summary evaluations of an object that have affective, cognitive and behavioral

components. These three components contribute to the formation and expression of attitudes.

Specifically, attitude towards help seeking indicated students' attitudes toward the benefits and costs of seeking help (Ryan et al., 1997). These beliefs or attitudes are major cognitive determinants of learners' behavioral intentions, as well as their actual behavior. The way that students perceive the benefits of seeking help depends on whether they recognize that help seeking is a useful strategy that promotes learning (Newman, 1990; Ryan et al., 1997). Thus, the empirical reviews were focused on the direct and mediating role of attitude towards help seeking on students' academic achievement.

2.1.7. Dimensions of Attitude towards Help Seeking

2.1.7.1. Benefit of Help Seeking

According to Pajares et al. (2004), the perceived benefit of help seeking represents the positive attitude towards seeking help on the task, being capable of solving a problem, and learning are the benefits of help-seeking. Students who perceive help seeking as beneficial should be less hesitant to engage in help seeking behaviors. In turn, studies have repeatedly found that learners are more likely to seek help when they believe that doing so will allow them to solve the problem or to learn. They make clear that perceptions of benefits were positively related to the use of instrumental help that enhances their academic achievement (Huet et al., 2011; Ryan et al., 1997).

2.1.7.2. Costs of Help Seeking

Costs of help seeking denote students' negative perceptions towards the consequences of seeking help. It reflects a threat to self-worth engendered by help-seeking in that the need for help is construed as evidence of low ability and thus will

incur negative reactions or judgments from others. In the literature, there are two perceived threats of help seeking that have been studied in the classroom: its threat to self-esteem (or perceived threat) and its threat to autonomy or autonomous orientation (Butler, 1998; Newman, 1990).

Accordingly, help seeking can be viewed by learners as a threat to their self-esteem, in that for them, seeking help indicates low ability to resolve the problem on their own. Consequently, they do not seek help because they want to maintain an impression of ability and avoid negative judgments (Butler & Neuman, 1995). Help seeking can also be negatively perceived if learners regard it as a dependent behavior that conflicts with their personal need for autonomy or for independent mastery and self-reliance; thus, they do not seek help because they want to achieve the task without any external help (Butler, 2007; Newman, 1990). However, the study was focused on threats to self-esteem to explain students' negative attitude towards help-seeking.

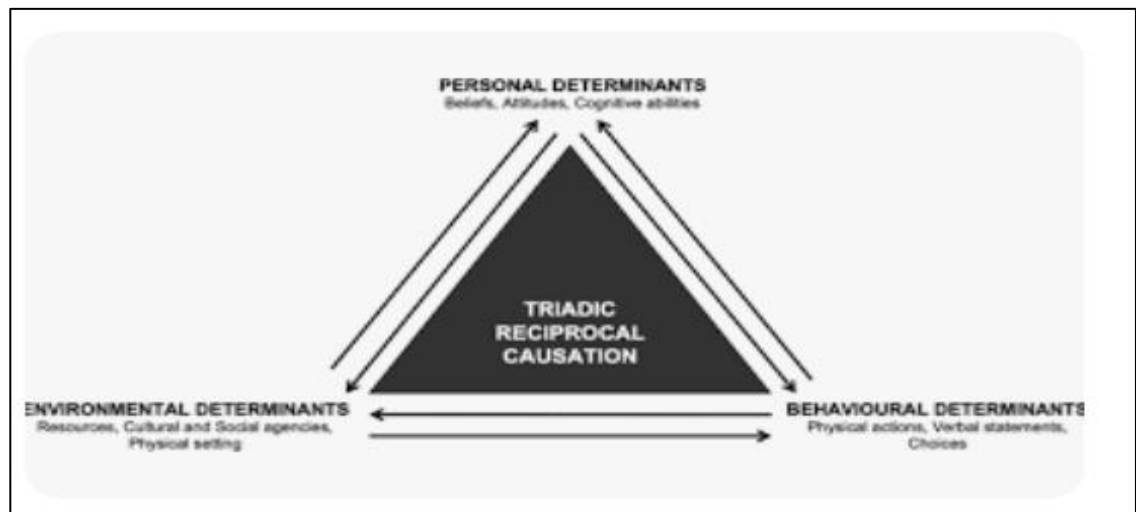
2.1.8. Theoretical Framework:

2.1.8.1. Bandura's Social Cognitive Theory and the Triadic Reciprocal Model

Albert Bandura's Social Cognitive Theory (SCT) explains human learning and behavior through the principle of triadic reciprocal determinism, which posits a continuous and dynamic interaction among three factors: personal factors, behavior, and the environment. According to Bandura (1986), individuals are both products and producers of their environments; they influence and are influenced by the social systems in which they operate (Bandura, 2001).

In educational contexts, this means that a learner's thoughts, emotions, and beliefs (personal factors) interact with their observable behaviors and the surrounding social

environment to shape learning outcomes such as academic achievement (Schunk, 1991). At the core of Bandura's theory lies this principle of triadic reciprocal determinism, which describes the dynamic interaction between personal factors (such as cognitive processes, self-beliefs, and emotions), behavioral factors (the learner's actions and performance), and environmental factors (social and physical surroundings). These elements mutually influence one another in shaping how learning occurs (Bandura, 2001; Zimmerman, 1989a).



Applying Bandura's Social Cognitive Theory to the present study, learning and achievement in mathematics can be understood as outcomes of this reciprocal process. Students' personal factors, such as their attitudes toward help-seeking and social goals, influence their academic behaviors, particularly their willingness to seek help when encountering difficulties. At the same time, environmental factors, including their social skills and classroom interactions, shape how these behaviors are expressed and reinforced. When students possess strong social skills and positive attitudes toward help-seeking, they are more likely to engage in collaborative learning behaviors that enhance understanding and performance. Therefore, Bandura's Social Cognitive Theory provides a powerful lens through which to explain how social, cognitive, and behavioral processes work together to facilitate learning and achievement in mathematics.

2.2. Empirical Literature Review

2.2.1. Social Skills and Academic Achievement

Social skills such as cooperation with peers, initiating relationships, sharing, and receiving compliments enable students to interact effectively with others and to avoid socially unacceptable responses (Gresham, 2016). Growing bodies of research continue to support the effect of students' social skills, including positive peer and teacher-student interactions and competent social behaviors, on their academic achievement (DiPerna, 2006; DiPerna et al., 2005; Gresham, 2016). In addition, Ladd et al. (2006) explain that students who have excellent social skills easily adopt the student role, better participate in classroom activities, cooperate with peers, share and receive compliments, and have better academic achievement. They show that students' social skills are important for success in both academic and peer-group settings.

Considerable research has documented meaningful and predictive relationships between students' social skills and academic achievement. They had been documented that students who have positive interactions and relationships with their peers are more academically engaged and have higher levels of academic achievement (Cooper et al., 2014; Walthall et al., 2005). To illustrate the relationship between social skills and academic outcomes, Malecki and Elliot (2002) also found that social skills positively predicted current and future standardized academic achievement, whereas problem behaviors negatively predicted current standardized academic achievement.

There are numerous studies that have explored causal relationships between social skill and academic achievement of students. They studied socially responsible behavior and quality of peer relationships as objective aspects of social skill revealed that social skill is an influential predictor of academic achievement, even more than intellectual ability (Cooper et al., 2014). Quality of students' social relationships has also been found to have a motivational significance, creating contexts that make students feel like they are a valued part of the classroom, hence making students more likely to adopt positive learning behaviors that lead to academic achievement (Lane et al., 2004; Meier et al., 2006).

Particularly, during the early adolescence period, students' identification with and conformity to peers increases dramatically; as a consequence, the quality of peer relationships at this age may have a particularly strong impact on adjustment and subsequent performance at school (Walthall et al., 2005). In line with this, the literature suggests that having friends to serve as academic as well as social resources can have a direct and positive influence on achievement outcomes at school (DiPerna, 2006). For

instance, students provide mutual assistance by clarifying and interpreting their teacher's instructions, volunteering substantive information and answering content-based questions, sharing various resources such as notes and books, and modeling academic skills (Shim et al., 2013).

The adequate development and expression of social skills in the early adolescence period is fundamental to establishing successful relationships with peers. Children who experience positive peer interactions have the opportunity to assimilate social norms and learn adaptive modes of social behavior and social cognition (DiPerna et al., 2005). Furthermore, positive social behaviors and interactions are requisites for educational success and psychological adjustment (Magelinskaitė-Legkauskienė et al., 2016). On the contrary, social difficulties in early childhood have been associated with current and future maladjustment: difficulties in academic performance, internalizing and externalizing problem behaviors, and early withdrawal from school (Denham & Brown, 2010).

Moreover, a similar line of researchers has demonstrated social skills as a separate, but important influence on academic outcomes. Students with a lack of social skills often demonstrate difficulties in the development and maintenance of interpersonal relationships; display a lack of pro-social behavior patterns, and poor academic achievement (Durlak et al., 2011; Miles & Stipek, 2006). In this regard, Gresham (2016) found that a student with early childhood positive behavioral characteristics predicted later academic achievement, but those with early negative behavior traits did not exhibit successful academic achievement. Likewise, Ladd et al. (2006) make clear that students need social skills to successfully resolve tasks and progress academically. Students who

acquire good social skills at an early age more easily adopt the student role, participate in classroom activities, and have better academic outcomes later in school.

In general, although previous research supports of the role of social skills on students' academic achievement, Gustavsen (2017) explains that investigations of the role of social skills on academic achievement have produced mixed results. Some studies have reported a significant positive relationship (Caprara *et al.*, 2000; Jennings & DiPrete, 2010; Konold *et al.*, 2010), whereas others have found that social skills are not a strong predictor of later academic achievement (Claessens, Duncan, & Engel, 2009). Thus, although to some extent the literature shows the role of social skill on academic achievement, there is still little evidence that shows the contribution of social skill to students' academic achievement, and more importantly, how social skill influences students' academic achievement.

2.2.2. Social Skill and Help-Seeking Behavior

Social skills include the specific behaviors individuals have that allow them to effectively engage in a social task and promote positive interactions with others in their environment (Gresham, 2016). Social skills such as cooperation with peers, initiating relationships, sharing, and receiving compliments enable students to interact effectively with others and to avoid socially unacceptable responses. Within the classroom environment, valued social skills are a key component and allow students to engage in reciprocal positive interactions with other students that promote successful academic achievement (Elliott *et al.*, 2001).

In this regard, Wentzel (1993) conducted a study that intended to understand the mediating effect of academically oriented behavior on the relation between pro-social and

antisocial classroom behavior to academic achievement. The result among the overall population implies that pro-social behavior positively correlated with academic behavior ($r = 0.43$, $p < .001$) and positively predicted the academic behavior ($\beta = 0.17$, $p < .001$). Conversely, antisocial behavior negatively correlated with academic behavior ($r = -0.49$, $p < .001$) and negatively predicted academic behavior ($\beta = -0.10$, $p < .05$). He further explains that social skill promotes classroom learning indirectly by facilitating achievement-oriented behavior that contributes directly to learning and performance. This is especially true for learning that takes place within socially interactive settings, such as cooperative learning groups.

Comparable research shows that students who are better able to interact with others have more resources to benefit from the learning environment compared to students who struggle to cooperate with peers and teachers (Denham & Brown, 2010). In line with this, Ryan et al. (1998) suggested that students would be more comfortable seeking help in classrooms characterized as caring, supportive, and friendly, and where students felt that others knew and related to them beyond their academic abilities.

In a study of 203 predominantly white middle school students, Ryan et al. (1997) found that greater perceived social competence was related to reduced reluctance to seek help. This is presumably because students who are high in perceived social skill know how to form relationships, thus creating opportunities to use individuals in their environment as resources in problem-solving. However, little research has established the nature of the relationship between students' social skills and academic achievement. Thus, more research is needed to understand the role of social skills in students' help-seeking behavior to enhance their learning and achievement.

2.2.3. Social goal orientation and academic achievement

Academic goals, in particular achievement goals, have been the focus of much research and have provided insight into students' behaviors and performance in academic settings (Kiefer & Ryan, 2008). However, students pursue a wide range of goals beyond academic achievement goals. Given the social nature of school, it is not surprising that students' social goals are increasingly being appreciated as important to understanding achievement in school (Wentzel, 2000). The existing literature suggests that students may have social reasons for trying to succeed academically (Dowson & McInerney, 2001, 2003; Kiefer & Ryan, 2008; Urdan & Maehr, 1995).

The importance of investigating social goals in academic settings is underscored by the perspective that learning does not occur in a social vacuum (Wentzel, 2000). Indeed, Dowson and McInerney (2001); Dowson and McInerney (2003) assert that social goals may actually be more salient and predictive of students' global motivation and achievement than both mastery or performance goals and may be better able to predict students' achievement in the classroom over more academically focused goals. They explain that social goals students strive for in peer interactions might provide useful insights into students' academic achievement.

Similarly, Kiefer and Ryan (2008) conducted a study to examine the role of social goals (dominance, intimacy, and popularity goals) on engagement and academic achievement among grades sixth and seventh ($N = 718$ and $N = 665$) respectively. The result among overall population implies that popularity goal had a significant negative correlation with academic achievement (GPA) ($r = -0.09$, $p < .05$). Conversely, intimacy goal had a significant positive correlation with academic achievement (GPA) ($r = 0.12$,

$p < .01$). The finding indicates that popularity goal has negative whereas intimacy goal has positive implication for students' engagement and achievement in school.

Evidence of a positive relationship between social goals that students endorse and academic performance comes from various research findings. They demonstrated that social goals students endorse will prompt the use of different behavioral strategies that may impact peer relationships and ultimately their academic effort and achievement (Anderman, 1999; Bhat, 2014). On the other hand, Kiefer and Ryan (2008) explain that several social goals have been discussed and examined in the literature, including being pro-social and responsible (Wentzel, 1999b), forming peer relationships and having high social status (Hicks, 1996), gaining social approval, and bringing honor to family (Urdan & Maehr, 1995). These researchers have acknowledged the unique and independent contribution that social goals and their related social behavior have on students' academic achievement.

Moreover, Wentzel (1996) conducted a study to examine the role of academic motivation and social motivation in the effort to achieve academically in English class among sixth ($N=290$) and eighth ($N=216$) students. The results imply that social goal pursuit had a significant positive correlation with sixth-grade English grades ($r = .23$, $p < .001$); similarly, social goal pursuit had a significant positive correlation with eighth-grade English grades ($r = .18$, $p < .001$). The finding indicates that students' social goal pursuit has implications for students' effort and achievement in school. This finding supports previous work indicating that social motivation is integrally related to academic motivation as well as academic achievement (Wentzel, 1993a).

In general, findings from social goals research strongly suggest that students' social intimacy goals are positively related to their academic achievement, whereas social status goals are negatively related to academic achievement. However, students' social goal pursuit has been studied less frequently than motivational orientations towards academic achievement. Moreover, little is known about the relations between students' social goal pursuit and academic achievement as an achievement motivational variable. But, middle school students' social goal pursuit has been related to classroom behavior as well as indicators of academic achievement; increasingly, academic researchers have acknowledged the unique and independent contribution of those social goals. Altogether, the review indicates the need to examine the role of social goals in order to understand students' academic achievement.

2.2.4. Social Goals Orientation and Help-Seeking Behavior

It is not surprising that academic motivation affects help-seeking as it is a form of academic engagement (Kiefer & Shim, 2016). However, help-seeking from peers may be affected by students' social strivings as well. What a student wants to achieve from a social relationship or interaction tends to affect how students interact with peers around an academic task (Urda & Maehr, 1995). Social goals that represent the different goal orientations toward students' social interaction (intimacy and status goal orientation) are related to help seeking around academic tasks (e.g., Anderman, 1999; Dowson & McInerney, 2003; Ryan & Patrick, 2001).

Students' social goals and strivings for their interpersonal relationships with their peers are likely critical to explain their relationships and cooperation with their peers at school. Social goal orientation in school is another aspect of social motive that might be

related to students help seeking behavior (Kiefer & Shim, 2016). Seeking help is different from other self-regulatory strategies in that it necessarily involves other people; it is both a learning strategy and social interaction (Marchand & Skinner, 2007). Thus, it was anticipated that students' social as well as academic goals would be related to help-seeking beliefs and behaviors (Kiefer & Shim, 2016).

Research has also shown that students' social goals relate to specific behavioral patterns and behavioral responses to social situations. Students strive for a variety of social goals among peers, including popularity, dominance, and intimacy, which have significant implications for social and academic behaviors (Ryan & Patrick, 2001). They explain that students who strive for popularity may view help-seeking as socially threatening or as garnering unwanted attention. Popularity goals may be negatively related to adaptive help seeking and positively related to expedient help seeking. Whereas, students striving for intimacy may actively seek out opportunities to exchange ideas with peers around academic tasks and develop supportive social relationships. Intimacy goals may be positively related to adaptive help seeking from peers, negatively related to expedient help seeking from peers (Dowson & McNerney, 2003; Sijtsma et al., 2009).

In line with this, Ryan et al. (1997) conducted a study intended to understand why some students avoid help-seeking in their classroom among elementary school students. The study was administered to 443 fifth graders in 12 elementary schools in Michigan. They found that intimacy goal had a significant negative correlation with avoidance of help seeking ($r = -0.21, p \leq .05$) and negatively predicted the avoidance of help-seeking ($\beta = -0.10, p \leq .05$). Conversely, social status goal had a significant

positive correlation with avoidance of help seeking ($r = 0.22$, $p \leq .05$) and positively predicted the avoidance of help-seeking ($\beta = 0.11$, $p \leq .05$). The study indicates that students who endorse intimacy goals may seek help when they need it because they value peer interactions and view help-seeking as an acceptable and valued activity in the classroom whereas students who were concerned with their social image or status among their peers were less likely to ask for help when it was needed.

Similarly, more recently, Kiefer and Shim (2016) examined longitudinal associations between social goals and academic help seeking among peers during early adolescence. Students self-reported social goals (dominance, intimacy, popularity), efficacy (academic, social), teacher support, and help seeking among peers (adaptive, expedient, avoidance of help seeking) across the sixth grade ($N = 345$; 49% females, ages 11–12). The result revealed that intimacy goal orientation had a significant positive correlation with adaptive help seeking ($r = 0.25$, $p < .01$), has no significant relation with expedient and avoidance help seeking and positively predicted the adaptive help seeking ($\beta = 0.11$, $p \leq .05$). On the other hand, popularity goal orientation had a significant positive correlation with expedient and avoidance help seeking ($r = 0.31$, $p < .01$; $r = 0.26$, $p < .01$) respectively, has no significant relation with adaptive help seeking and positively predicted the expedient help seeking ($\beta = 0.12$, $p \leq .05$).

In another study involving high school students, Zarrin et al. (2016) conducted a research to explore prediction of academic help seeking by motivational variables (achievement goals and social goals) 400 students were selected among all Isfahan first grade high school students. They found that social intimacy goal positively related or predicted instrumental help seeking behavior ($\beta = 0.393$, $p \leq .001$). On the other hand,

social status goal negatively predicts instrumental help-seeking behavior ($\beta = -0.17$, $p \leq .01$). The results indicated the importance of considering social and motivational variables (achievement goals and social goals) in association with academic help-seeking. The result also shows that social goals play a pivotal role in how students address their help-seeking needs.

As a whole, although previous studies somewhat show the relationship between students' social goals and help-seeking behavior in various manners across a variety of studies, the review also indicates that there is a lack of empirical evidence on such relationships. The reasons why social goal pursuit is related to learning and achievement are not readily apparent. However, the little empirical evidence indicates that social goal orientation had an impact on students' classroom behavior, engagement, and academic achievement. They indicated there is a vital need to understand the role of social goals that students pursue to explain students' help-seeking behavior and the mediating role of help-seeking behavior (Kiefer & Ryan, 2008; Kiefer & Shim, 2016). Thus, this paper aimed to provide empirical evidence on this relationship among early adolescent Grade 8 students.

2.2.5. Attitude towards Help Seeking and Help Seeking Behavior

The factors that encourage or discourage students from seeking help in the classroom have been examined thoroughly in the literature during the last decade (Huet et al., 2011). Evidence from a number of studies has shown that students' attitudes toward the benefits and costs of seeking help influence their actual help-seeking behavior. It has been shown that the act of help seeking is a complex phenomenon, highly influenced by students' attitude towards seeking help (Huet et al., 2011; Skaalvik & Skaalvik, 2005). Attitude

towards help-seeking dominates students' help-seeking strategies. Those who perceive help-seeking as beneficial for learning adopt adaptive strategies of help-seeking (Tanaka et al., 2002). On the opposite, those who perceive it as a threat have lesser tendencies to engage in instrumental help-seeking (Skaalvik & Skaalvik, 2005; Tanaka et al., 2002).

In line with this, Karabenick (2001) conducted a study to increase understanding of college students' help-seeking behavior in large classes; the researchers considered 883 college students. The study revealed that threat of help seeking had a significant negative correlation with instrumental help-seeking ($r = -0.26$, $p < .001$); whereas, threat of help seeking had a significant positive correlation with executive help-seeking and help seeking avoidance ($r = 0.52$, $p < .001$; $r = 0.69$, $p < .001$). The finding shows that the threat of help-seeking has a significant influence in order to explain students' help-seeking behavior.

Research completed by Tanaka et al. (2002) investigated the relationship between achievement goals and attitude toward help seeking and self-reported help-seeking behavior in 131 eighth- and ninth-grade Japanese junior-high school students. Measures included self-report of a 6-point Likert-like scale ranging from 1 (*not at all true of me*) to 6 (*very true of me*). They found that adaptive help seeking has significant positive correlation with benefit of help seeking ($r = -0.53$, $p \leq .001$); whereas help seeking avoidance has significant positive correlation with help seeking threat ($r = -0.28$, $p \leq .01$). Results of Tanaka et al.'s path analysis indicated that help-seeking threat was related to avoidance, $\beta = .36$, statically and significantly with eighth and ninth graders and that threat was inversely related to adaptive help-seeking, $\beta = -.17$. The result shows that

attitudes are important antecedents to behavioral intentions that influence their actual help seeking behavior.

Likewise, Ryan et al. (1997) conducted a study to determine the role of motivation and attitudes in adolescents' help-seeking behavior in Math Class. The research included grade 7th and 8th ($N = 203$) students as a sample. The study revealed that threat help seeking from peers had a significant positive correlation with avoidance of help seeking ($r = 0.36, p \leq .01$) and positively predicted the avoidance of help-seeking ($\beta = 0.19, p \leq .01$). Conversely, perceived benefit of help seeking had a significant positive correlation with adaptive help seeking ($r = 0.61, p \leq .01$), and predicted the adaptive help-seeking ($\beta = 0.31, p \leq .001$); Moreover, it negatively correlate with avoidance help seeking ($r = -0.50, p \leq .01$) and predicted the avoidance of help-seeking ($\beta = -0.24, p \leq .01$). When students perceived that help seeking was beneficial, they were less likely to avoid asking for help when they needed it. However, when students reported feeling threatened by their peers or teachers, they were more likely to avoid asking for help when they needed it.

Furthermore, Roussel et al. (2011) conducted a study to explore the role of achievement goals, social goals, and attitude toward help-seeking on help-seeking from peers in an academic context was examined in two studies. A total of 551 high school students participated in the two studies in the Caucasian area of Toulon, France. In study 2 they found that benefit of help seeking has significant positive correlation with instrumental help seeking ($r = .37, p \leq .01$); whereas, threat of help seeking has significant negative correlation with instrumental help seeking ($r = -0.43, p \leq .01$). Results of Roussel *et al.*'s path analysis indicated that help-seeking benefit was related to

instrumental help seeking from peers, $\beta=.37$, and that threat was inversely related to instrumental help seeking, $\beta= -.21$ which is statically significant. The result shows that attitudes are important antecedents to behavioral intentions that influence their actual help-seeking behavior.

To sum up the most important findings so far, indicated that the students' instrumental help is positively related to the perception of help seeking as beneficial. Whereas perceptions of the threat posed by help seeking to self-esteem or autonomy, the sparse results show that perceived threat is positively related to avoidance and executive of help seeking, whereas inversely related to instrumental help seeking. However, the literature clearly shows the need for more research to improve our understanding of the nature of the relationship between attitude towards help-seeking and help-seeking behavior. Besides, other motivational factors that might affect students' attitude towards help-seeking are social skills and social goal orientation.

2.2.6. Help-Seeking Behavior and Academic Achievement

Help-seeking is an interactive and structured social behavior that positively affects students' academic achievement (Karabenick, 2004; Newman, 2002). The results of previous studies on academic help-seeking have shown that help-seeking from formal sources such as teachers, or informal sources, such as peers, leads to positive results, such as positive trends towards learning and improved students' learning and achievement (Martin-Arbos et al., 2021; Newman, 2002; Schenke et al., 2015). Likewise, Newman (2002) asserts that seeking academic help from colleagues and teachers is very useful and important in improving academic achievement. It is an important strategy used by those

who face academic difficulties to obtain academic assistance and gain information and skills.

Besides, Patrick et al. (2011) conducted a study to examine the motivational correlates and achievement consequences of students' help-seeking tendencies during sixth grade ($N = 217$). The research examined two aspects of help-seeking behaviors in the classroom: adaptive and avoidant help-seeking tendencies. The result implies that adaptive help seeking had a significant positive correlation with academic achievement (GPA) ($r = 0.52, p < .01$) and positively predicted the academic achievement (GPA) ($\beta = 0.34, p \leq .001$). Conversely, avoidance help-seeking had a significant negative correlation with academic achievement (GPA) ($r = -0.42, p < .01$) and negatively predicted the academic achievement (GPA) ($\beta = -0.18, p \leq .001$).

In the literature, the appropriate use of help is regarded as a self-regulated learning (SRL) strategy that enhances students' learning (Martin-Arbo et al., 2021). As well as allowing learners to resolve a problem they cannot resolve by their own means, this strategy enables them to improve their learning and to work more efficiently (Karabenick, 2004; Ruihua et al., 2025). A study carried out by Fong et al. (2021) used meta-analytic techniques to assess the relationship between academic help-seeking variables and achievement (GPA, grades, test scores) among postsecondary students in 108 studies (119 samples, $N = 37,941$). The result revealed that avoidance of help seeking and executive help seeking had a significant negative correlation ($r = -0.18, p < .00$ and $r = -0.10, p < .01$) respectively; whereas, instrumental help seeking significant positive correlation ($r = 0.11, p < .001$) with academic achievement.

Ryan et al. (2005) analyzed grade fifth 474 students' help-seeking tendencies in the classroom in relation to mathematics achievement. Students with avoidant help-seeking tendencies had lower mathematics grades than students with appropriate help-seeking tendencies. The research confirms that when students sought help in a mathematics classroom, they would be more academically successful than students who did not seek help. Correspondingly, Ryan et al. (1997) conducted a hierarchical regression using grade point average (GPA), avoidance of help seeking, and threat associated with help seeking. Step 1 of the regression analysis produced a statistically significant inverse relationship between avoidance of help seeking and GPA and between threat and GPA.

In another study, Karabenick (2001) attempts to understand why students fail to seek the assistance needed to overcome academic difficulties, especially in large, relatively impersonal classes. The study involved $N = 883$ students and examined their help-seeking attitudes, behavior, and achievement goals. The factor analysis suggested that students could be parsimoniously described by two help-seeking orientations: a) strategic/adaptive, the degree to which students sought instrumental help (e.g., explanations rather than answers), and b) avoidant, the extent to which students felt threatened by and avoided seeking help that if obtained, would be to reduce their workload (executive goals). A person-centered hierarchical cluster analysis indicated that 17% of the students could be classified as strategic/adaptive, and 23% described as help-seeking avoidant. Students with a higher, strategic/adaptive orientation were more motivated and self-regulating, with higher course grades. Students with a higher help-seeking avoidant orientation were more anxious, performed more poorly.

Moreover, experimental studies indicated that help-seeking during problem-solving tasks enhanced performance. On the other hand, students who avoid seeking help for difficult academic tasks tend to have achievement that is lower than those who engage in adaptive help-seeking, but similar to expedient help seekers, at least in elementary school (Ryan et al., 2005) and in college (Karabenick, 2003). They also show lower use of learning strategies compared to adaptive help seekers in college; although they are likely to use rehearsal and organization, elaboration, and meta-cognition, use is low (Karabenick, 2003).

Over the last two decades, various studies have found that adaptive help seeking is an active strategy that serves as an aid to achieving academic success in the face of difficult or challenging tasks (Schenke et al., 2015). In the academic context, students who seek help with coursework are better able to maintain involvement in difficult tasks, avoid the possibility of academic failure, and increase their chances of mastering the material. The researches make clear that achievement has been linked with help-seeking style (Fong et al., 2021; Ruihua et al., 2025; Ryan et al., 2005).

However, despite the demonstrated benefits of seeking help, researchers have found that many students do not seek help when they are in need. There is a variation among students in their behavior to seek academic help. Some of them seek help that is only necessary to learn and improve skills, and some of them ask others to complete the task for them completely, and others refrain from asking for this help and avoid it. This variation results in differences in students' motivational orientation, cognitive and meta-cognitive strategies they use (Fong et al., 2021). In this regard, the result of previous studies suggested the importance of considering aspects of motivational factors in an

attempt to understand students' help-seeking behavior in the classroom (Marchand & Skinner, 2007; Parker et al., 2019). Thus, it is important to study the role of social skill and social goal orientation on help-seeking behavior and its mediating role in the relationship between social skill and social goal orientation with academic achievement to enhance students' academic achievement.

2.2.7. The Meditational Role of Dimensions of Help-seeking constructs

Dimensions help seeking constructs may represent one of the key mechanisms that underlie the relationship between motivational orientation (social skill and social goal orientation) with academic achievement. Broadly, dimensions help seeking constructs: students' attitude towards help seeking (Tanaka et al., 2002) and academic help-seeking behavior (Martin-Arbo et al., 2021) enable them to resolve their learning difficulties and enhance academic achievement. Thus, the research focuses on these two important aspects of help-seeking constructs that have consistently been related to social skill, social goal orientation, and academic achievement: attitude towards help seeking and help-seeking behavior.

The research hypothesis proposed that attitude towards help seeking and academic help-seeking behavior mediated the relation between students' social skills and social goal, and academic achievement. Previous research in academic settings, to some extent, has provided support for this hypothesis; social skills (DiPerna et al., 2002) and social goal orientation (Kiefer & Shim, 2016) may indirectly influence academic achievement through behaviors that are more related to students' learning and achievement: attitude towards help seeking and help-seeking behavior.

Previous empirical studies indicated that social skills and social goal orientation influence students' interaction and help-seeking behavior (Kiefer & Shim, 2016), and attitude towards help seeking (Newman, 2000). They stated that students' social skills and the type of social goal endorsed significantly influence academically oriented behavior (help-seeking behavior) and their attitude towards help-seeking. On the other hand, when students encounter ambiguity or difficulty in their academic task, their attitude towards help-seeking and help-seeking behavior is critically important to resolve their learning difficulties and to secure the necessary help and continue the learning process (Roussel et al., 2011; Skaalvik & Skaalvik, 2005).

In addition, Jensen (2021) explains that social behaviors are important to the successful social and academic functioning of students and play a significant role in avoiding or preventing negative responses from others, and encourage collaboration with their peers. In consequence, interactions with peers make up an important part of the process by which students learn, construct knowledge, and collaborate with their peers (Wentzel & Watkins, 2002). Notably, students social skill (Ryan et al., 2005) and social goal orientation (Patrick et al., 2011) are appears to place students in a more advantageous position to engage in high-quality social interactions, influence their attitude towards help seeking from their peers and allow them to collaborate with peers (help seeking behavior) which in turn, results in learning and academic achievement.

More importantly, although few studies have shown those students' attitudes toward the benefits and costs of seeking help related to their help-seeking behavior, findings revealed that students' attitude towards help seeking influences their decision to seek help and has important implications for how students ultimately act (Huet et al.,

2011). They found that attitude towards help seeking is an antecedent of students' help-seeking behavior; the way that students perceive the benefits or threat of seeking help is an important determinant of help-seeking behavior (Huet et al., 2011; Skaalvik & Skaalvik, 2005). Interestingly, Newman (2000) found that attitude towards help seeking mediates the relation between motivational orientations and help-seeking behavior.

In general, despite all this, only a few researchers have evaluated the importance of social skill and social goal orientation on students' academic achievement, and the role of academic help-seeking behavior and attitude towards help-seeking in explaining the relationship between these variables with academic achievement in a separate manner. But a better understanding of the relation among these constructs will provide additional insight for guiding assessment and interventions (Keith, 2002; Parker et al., 2019). Thus, within the current study, the research investigated how attitude towards help seeking and help seeking behavior mediate the relationship between social skill and social goal orientation with students' mathematics achievement in a sample of Grade 8 students. The mediational model is shown in Fig. 3.

2.2.8. The Mediating Role of Attitude towards Help Seeking

Students' attitude towards help seeking is one of the possible mechanisms that may underlie the relationship between students' social skills and social goal orientation with academic achievement. An attitude toward help seeking denotes students' perception of the benefits and costs of seeking help to resolve their academic difficulties. Students' attitudes are major cognitive determinants of their behavioral intentions as well as their engagement in classroom activities (Huet et al., 2011; Pajares et al., 2004).

Even though both negative (threat) and positive (benefit) attitudes towards help seeking are often theorized as early antecedents to behaviors as well as engagement and academic achievement (Pajares et al., 2004). It is important to discuss factors that influence students' attitude towards help-seeking. In this regard, Newman (2000) clarifies that peer relationships and interactions are most influential in order to understand students' attitude towards help-seeking. Classroom peer climate is optimal for facilitating students' attitude towards help-seeking. Social features of the classroom, such as positive peer interaction, will help students to develop a positive attitude towards help-seeking.

Accordingly, since students' social skills (Cooper et al., 2014) and social goal orientation (Dowson & McInerney, 2003) are critical aspects of their social interaction among peers, it is plausible that these constructs are important in order to explain students' attitude towards help seeking. Thus, students having higher levels of social skill and social intimacy goals may engender a positive attitude towards help seeking that, in turn, fosters further effort and, ultimately, better academic achievement. In contrast, lower social skills and social status goals may deprioritize attitude towards help seeking that, in turn, discourages effort and, ultimately, impacts academic achievement.

In general, although theoretical evidence indicated that social motivational factors (social skill and social goal orientation) are important in order to understand students' attitude towards help seeking, and, in turn, students' attitude towards help seeking might mediate the relation between social skill and social goal orientation with academic achievement. However, Yet, to my knowledge, less research has established the nature of the relationship between these variables. Obviously, more research is needed to more carefully investigate how attitude towards help seeking mediates the relation between

social skill and social goal orientation with academic achievement, as well as the role of these variables, to understand the variance in students' attitude towards help seeking.

2.2.9. The Mediating Role of Academic Help-Seeking Behavior

One way that motivational orientations, Social skill, and social goal orientation may be linked to mathematics achievement is that social skill and social goal orientation are associated with students' academic help-seeking behavior. Academic help-seeking behavior, in turn, might enhance learning and achievement. In the literature, the appropriate use of help is regarded as a behavioral self-regulated learning (SRL) strategy that enhances students' learning and achievement (Martin-Arbo et al., 2021). As well as allowing learners to resolve a problem they cannot resolve by their own means, this strategy enables them to collaborate and work more efficiently with their peers (Huet et al., 2011; Karabenick, 2004; Skaalvik & Skaalvik, 2005).

An increasingly robust body of literature suggests that academic help seeking behavior is highly related to later academic achievement. Particularly, instrumental (adaptive) help seeking allows students to gain knowledge and skills that promote understanding, achievement, and subsequent independence (Fong et al., 2021). However, help-seeking behavior is cognitive, social, and metacognitive all at the same time and is ultimately facilitated by individual differences in all these areas (Karabenick, 2004; Newman, 2000).

Help-seeking behavior is unique in that it involves social interaction among students; it is more likely to be affected by social motivational factors. Accordingly, social features of classroom context are vital in order to explain students' seeking behavior (Kiefer & Shim, 2016). Social conditions partly determine the nature and

functions of friendships during the early adolescence period (Newman, 2000; Smalley & Hopkins, 2020). Mainly, students' social skills (Ryan et al., 2005) and social goals (Kiefer & Shim, 2016) are more critical in order to understand their help-seeking behavior.

Additionally, the social relationships that students have with their peers are important to their willingness to seek help (Marchand & Skinner, 2007; Ryan et al., 2005). Similarly, the social goals students have for their peer relationships are important predictors of academic and social adjustment during early adolescence as well as aspects of academic help seeking (Kiefer & Shim, 2016). Thus, academic help-seeking behavior may explain how students' social skills and social goal orientation as motivational orientations truly influence their academic achievement.

In general, previous studies have shown that help-seeking behavior allows students to resolve their learning difficulties and direct antecedent of academic achievement (Newman, 2002; Shim et al., 2013). On the other hand, some scholars suggest social skills (DiPerna et al., 2002) and social goal orientation (Kiefer & Shim, 2016) indirectly influence achievement by allowing students to work more successfully with peers, ask questions, and attend to the classroom environment. More importantly, students' social skills (Cooper et al., 2014) and social goal orientation (Patrick et al., 2011) are vital in order to explain their help-seeking behavior. Therefore, it is plausible that help-seeking behavior mediates the pathway in relations between social skill and social goal orientation, and subsequent academic achievement: mathematics achievement. However, less research has established the nature of the relationship between these constructs; thus,

more studies should be carried out to improve our understanding of the relationship between these constructs.

2.3. Summary of Literature Review

After reviewing the literature on the concept of social skill and social goal orientation as motivational orientation and the literature that correlates students' social skills and social goal orientation with academic achievement, it is evident that there is much to be learned in this area. Specifically, there is a need to examine the role of social skills and social goal orientation as motivational orientations on students' academic achievement and how these variables influence their academic achievement. Particularly, the need to analyze the mediating role of dimensions of help-seeking variables (attitude towards help seeking and academic help-seeking behavior) on the relation between students' social skills and social goal orientation with their academic achievement.

Considerable research has documented meaningful and predictive relationships between students' social skills (e.g., Cooper et al., 2014; DiPerna, 2006; DiPerna et al., 2005; Miles & Stipek, 2006) and social goal orientation (e.g., Dowson & McInerney, 2001; Dowson & McInerney, 2003; Kiefer & Shim, 2016) on their academic achievement. It has been documented that students who have positive interactions and relationships with their peers, and have a social intimacy goal, are more academically engaged and have higher levels of academic achievement.

Moreover, although previous researches examine the role of social skill and social goal orientation on academic achievement in separate manners, the process by which students' social skill and social goal orientation influence academic achievement remains unclear (Caemmerer & Keith, 2015). On the other hand, existing limited studies

suggested that social skills DiPerna et al. (2002) and social goal orientation Kiefer and Shim (2016) indirectly influence achievement by allowing students to work more successfully with peers, ask questions, listen, and attend to the classroom environment. In this regard, the literature review somewhat specified that students' social skills and the type of social goal influence academic achievement operating through more academically oriented behavior (Marchand & Skinner, 2007). Thus, the review focuses on two important aspects of dimensions of help-seeking variables that have consistently been related to students' social skills, social goal orientation, and academic achievement, and that might explain how these variables influence academic achievement: students' attitude towards help seeking and academic help-seeking behavior.

In the literature, academic help seeking behavior is explained as behavioral self-regulated learning strategy that enables students' to effectively resolve their academic challenges (Martin-Arbo et al., 2021; Schenke et al., 2015); whereas attitude towards help seeking denotes the perceived notion of threat and benefits related to help seeking in the context of learning (Pajares et al., 2004; Roussel et al., 2011) in which both are directly related to student's learning and achievement. The review specified that students' academic help-seeking behaviors are more academically oriented behaviors that are directly related to learning and achievement.

However, accumulated evidence indicates that students' attitude towards help-seeking and academic help-seeking behavior are complex constructs that are influenced by various motivational factors (Marchand & Skinner, 2007). They revealed that since academic help-seeking behavior and attitude towards help seeking are social constructs, social features of classroom context are vital in explaining students' help-seeking

behavior and attitude towards help seeking (Chowdhury & Halder, 2019). Students' interaction with their peers is an important part of the process by which students learn, construct knowledge, and collaborate with their peers (Jensen, 2021; Magelinskaitė-Legkauskienė et al., 2016).

Moreover, particularly, prior examination somewhat specified that students' social skill (DiPerna et al., 2002) and social goals (Kiefer & Shim, 2016) that students pursue in their social interaction in achievement situations are key factors in explaining their academic help-seeking behavior and attitude towards help seeking. Students' social skill and their social goals in social interaction appear to place students in a more advantageous position to engage in high-quality social interactions, influence their attitude towards help seeking, and academic help seeking behavior with peers, in turn, results in learning and academic achievement. They indicated that students' academic help-seeking behavior and attitude towards help seeking might explain how social skills and social goal orientation influence their academic achievement (Kiefer & Shim, 2016; Shim et al., 2013).

Despite all this, the review indicated that only little researchers had been evaluated the importance of social skill (Malecki & Elliot, 2002; Miles & Stipek, 2006) and social goal orientation (Ryan & Patrick, 2001) to explain students' academic achievement, and the role of academic help seeking behavior (Kiefer & Shim, 2016; Schenke et al., 2015) and attitude towards help seeking (Newman, 1990; Roussel et al., 2011) in explaining the relationship between these variables with academic achievement. Still, little research has established the nature of the relation between these constructs to enhance students' academic achievement. Yet, the literature clearly indicated the need for more research to

better understand the potential mechanisms that mediate the relation between social skills and social goal orientation with academic achievement; more importantly, the mediating role of attitude towards help seeking and academic help seeking behavior.

2.4. Conceptual Framework of the Study

As far as research in academic contexts make clear, students' social skills (e.g., Elliott et al., 2001; Malecki & Elliot, 2002; Meier et al., 2006) and social goal orientation (e.g., Kiefer & Ryan, 2008; Kiefer & Shim, 2016) has adaptive alternative motivational orientations that influence their behavior and relationship, as well as academic achievement. On the other hand, researchers also suggested that social skills (Caemmerer & Keith, 2015) and social goal orientation (Kiefer & Shim, 2016) indirectly influence achievement by allowing students to work more successfully with peers and help-seeking behavior. In this view, although the literature provides little evidence on role of social skill (Newman, 2000; Smalley & Hopkins, 2020) and social goal orientation (Newman, 2000; Shim et al., 2013) to explain students' attitude towards help seeking and academic help seeking behavior in a separate manner, which, in turn, influences academic achievement, these variables might explain how social skill and social goal orientation influence students' academic achievement.

In sum, the most important point that emerged from the literature is that there are at least two ways in which these constructs might jointly contribute to students' academic achievement. First, it is reasonable to expect that a student's social skills, social goal orientation, attitude towards help seeking, and academic help-seeking behavior might make an independent contribution to their academic achievement. The second possibility is that social skills and social goal orientation enhance classroom learning and

achievement indirectly, operating through students' attitude towards help seeking and academic help-seeking behavior. Therefore, the research hypothesized that students' attitude toward help seeking and their academic help-seeking behavior might mediate the relationship between students' social skills and social goal orientation with mathematics achievement, in addition to the direct effects they have on mathematics achievement.

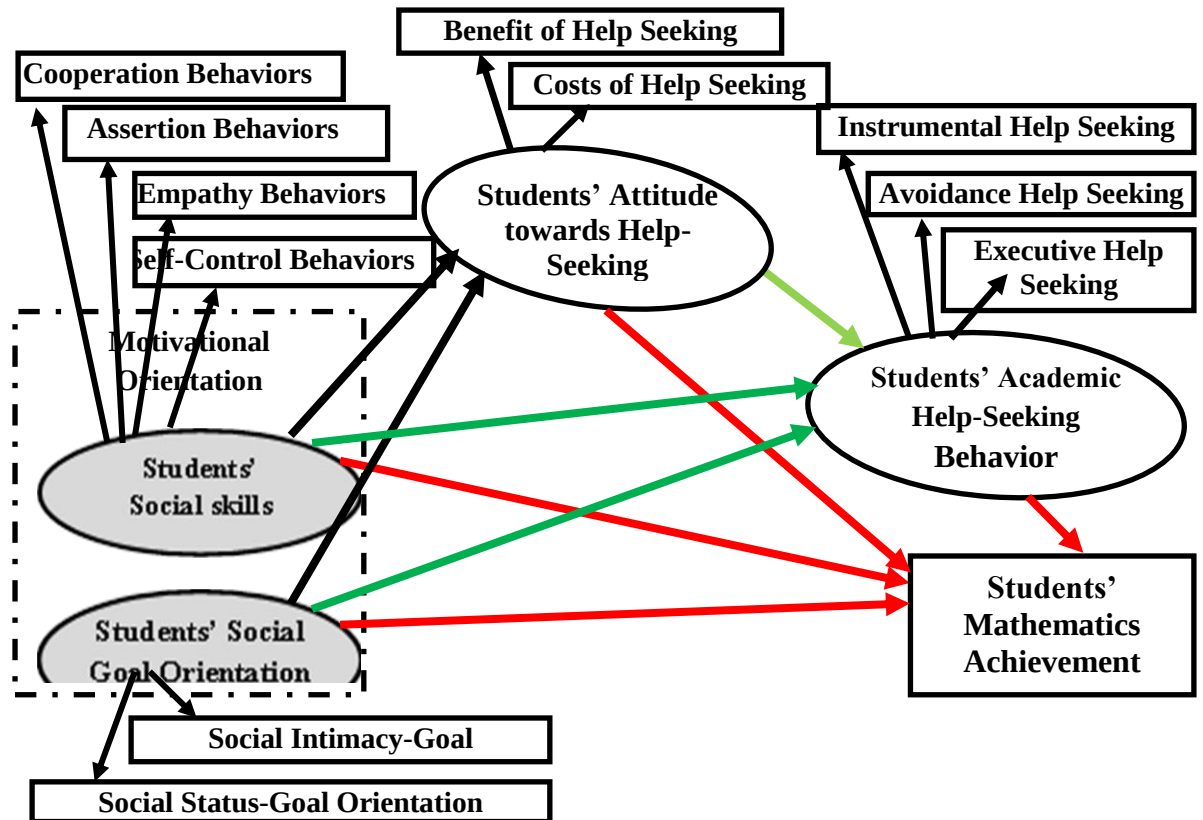


Figure 3: *Hypothesized relations of students' social skills, social goal orientation, attitude towards help seeking, academic help seeking behavior and mathematics achievement.*

Description of the Conceptual Framework

The conceptual framework depicted above was attempted to clarify the following indirect and direct relationships among constructs to explain students' mathematics achievement:

- The main indirect pathway depicted the role of motivational orientation (social skill and social goal orientation) on students' mathematics achievement, which

passes through both attitude towards help seeking and academic help seeking behavior.

- The second indirect pathway presented the role of motivational orientation (social skill and social goal orientation) on students' mathematics achievements, which passes through only attitude towards help seeking.
- The third indirect pathway shows the role of motivational orientation (social skill and social goal orientation) on students' mathematics achievements, which passes through only academic help-seeking behavior.
- Other paths revealed the direct contribution of students' social skills, social goal orientation, attitude towards help seeking, and academic help-seeking behavior on their mathematics achievement.
- Moreover, the model also shows the direct role of students' social skills and social goal orientation on their attitude towards help-seeking.
- Finally, the model revealed the direct role of students' social skills, social goal orientation, and attitude towards help-seeking on their academic help-seeking behavior.

CHAPTER THREE

RESEARCH METHODS

This chapter deals with methodological considerations that enable the researcher to achieve the objectives of the study. It begins with a discussion of the research paradigm, which is the basis for the overall research process. The second part contains an explanation of the research approach that is applied in the study. The third section deals with the research design that the researcher adopted, followed by presentations of the population, sample size, and sampling technique of the study. The next two sections elaborate on the data collection techniques and procedures, and the data analysis techniques used in the study. The last section of the chapter presents ethical considerations of the study throughout the whole process.

3.1. Research Paradigm

The research paradigm is defined as a broad philosophical approach to understanding and researching a phenomenon (Creswell, 2014). In line with this, the study adopted a post-positivist paradigm as its philosophical foundation to guide research reasoning and actions. In examining the relationships among the intended variables, this study took a post-positivist stance. Regarding this, Creswell (2014), post-positivism refers to thinking beyond traditional positivism, challenging the notion of absolute knowledge and recognizing that we cannot be entirely “positive” about our claims of knowledge when studying human behavior and actions. Consequently, post-positivism reflects a deterministic philosophy in which causes probably determine effects or outcomes.

Regarding ontology, post-positivism assumes objectivism, which posits that there is a single, objective reality (Petty et al., 2012). It recognizes that the social world exists

independently of the researcher, meaning that social reality has an existence separate from social actors (Maksimovic & Evtimov, 2023). Epistemologically, post-positivism views the researcher as independent from what is being observed, emphasizing that the properties of phenomena should be measured through objective means. Since there is only one reality, it can be expressed through variables and measured reliably and validly (Creswell, 2014; Medina & Taylor, 2013). In line with this, the study aimed to observe and measure the actual state of the intended variables. Accordingly, research instruments were adapted to enable the objective measurement of these variables, thereby producing factual and reliable knowledge.

Methodologically, this research is quantitative in nature, characterized by deductive approaches to the research process aimed at disproving or lending credence to existing theories. It involves measuring variables and testing relationships between variables in order to reveal patterns, correlations, or causal relationships, resulting in statistical data from a given sample. Consequently, the main methodological question for quantitative research is how the researcher can go through the process of research. Quantitative researchers try to conduct their studies under the assumption of objectivity (Johnson & Christensen, 2000).

Therefore, in line with a post-positivist perspective, the study adopted deterministic thinking, with emphasis on examining the mediating role of attitude towards help seeking and academic help seeking behavior in the relationship between students' social skills and social goal orientation with mathematics achievement. Moreover, the research also followed reductive reasoning with emphasis on developing testable hypotheses and with the intention of developing knowledge that enables

understanding the nature of the relationship among those variables to enhance students' mathematics achievement. Creswell (2014) explains that knowledge developed through a post-positivist lens is based on careful observation and measurement of the objective reality that exists "out there" in the world. Consequently, developing numeric measures of observations and studying individuals' behavior is central to post-positivist research. In line with this, the researcher attempted to observe and measure a reality in a systematic, logical, and rigorous way to obtain objective facts.

3.2. Research Approach

Based on the research philosophy that the research adopted (post-positivism) and to deal properly with the basic research objective, the research used a quantitative research approach. In this regard, quantitative research attempts to operate under the assumption of objectivity; it enables the researcher to study the phenomena of interest at a distance. Besides this, Johnson and Christensen (2000) also explain that in the quantitative approach, the researchers try to remain as neutral or value-free as they can, and they attempt to avoid human bias whenever possible.

As quantitative research, the research intended to gain a better understanding of the mediating role of academic help-seeking behavior and attitude towards help-seeking; as a result quantitative research approach was employed to explain the phenomenon (hypothetical conceptual framework) by collecting numerical data regarding predictor, mediator, and criterion variables of the study. Concerning this, Creswell (2012) clarifies that the quantitative research approach relies on the collection of quantitative data (numerical data) and follows the confirmatory scientific method because its focus is on hypothesis and theory testing.

In general, the research attempted to gather quantitative data to investigate the mediating role of students' help-seeking behavior and attitude towards help-seeking in the relationship between social skills and social goal orientation with their mathematics achievement. Quantitative data were collected on all variables (students' academic help-seeking behavior, attitude towards help-seeking, social skills, social goal orientation, and mathematics achievement) through closed-ended questionnaires, in which instruments were adapted from various scholars, and students' mathematics achievement results were taken from the schools' record office. Thus, quantitative research allowed the researcher to explain identified research issues by explaining the nature of the relationship among those variables. In this regard, Johnson and Christensen (2000) explain that quantitative research often uses what might be called a narrow-angle lens because the focus is on only one or a few causal factors at the same time. Quantitative researchers attempt to hold constant the factors that are not being studied.

3.3. Research Design

In line with the research objective, the study chose a correlational design that enables testing the research hypothesis. Correlational designs provide an opportunity to predict scores and explain the relationship among variables. As Creswell and Creswell (2017) explain that correlational designs are procedures in quantitative research in which investigators measure the degree of association or relation between two or more variables using the statistical procedure of correlational analysis. Explicitly, this study aimed to examine the mediating role of academic help-seeking behavior and attitude towards help-seeking in the relationship between students' social skills and social goal orientation with their mathematics achievement. So, a correlational design was appropriate in order to

achieve the main objective of the study, which enables us to examine and understand the nature of the relationship among those variables.

Moreover, correlational research is appropriate for studies seeking to determine the relationship between explanatory and response variables. In this view, Creswell and Creswell (2017) explain that correlational designs have been involved in more complex relationships among variables found in techniques of structural equation modeling, hierarchical linear modeling, and logistic regression. Thus, correlational research enabled the researcher to determine whether motivational orientation (social skill and social goal orientation), attitude towards help seeking, academic help seeking behavior, and mathematics achievement covary and, if so, to establish the directions, magnitudes, and forms of the observed relationships. This is the reason why the researcher used a correlational design with the intention of achieving the research agenda.

3.4. Population, Sample size, and Sampling Techniques

The target populations of the study were students who registered for the **2023/24** academic year among selected primary schools of the Dessie city administration. Consequently, the research was conducted exclusively among Grade 8 students in selected primary schools. In order to find out the target population of the research, first, the researcher selected the target primary schools in Dessie city. In doing this, the researcher employed a simple random sampling technique. According to the data obtained from the Dessie City Education Office, there are thirty-two government primary schools in the City.

Thus, the study randomly selects 9 (30%) primary schools in order to have a representative population. Then, the research had a total population of **1454** students

among selected primary schools, in which participants of the study were selected and the results of the study generalized. Next, the researcher attempted to determine the sample size of the study. Determining an adequate sample size plays a vital role in having a representative sample size and making meaningful inferences. Collier (2020) clarifies that to generalize from a random sample and avoid sampling errors or biases, a random sample needs to have an adequate size.

Accordingly, various researchers indicated that sample size should be based on the complexity of the model rather than on the bare minimum sample necessary to run the analysis (Collier, 2020). Consequently, although various rules of thumbs enable to determination of sample size for SEM, the research adopted Stevens' (1996) recommendations, which suggested having at least 15 cases per indicator (Collier, 2020). Accordingly, using the formula, among 1454 students, 930 were identified as a sample size for the research. Finally, the participants were selected using a systematic random sampling technique; a proportional number of students was selected from each school. Thus, research utilized data from 930 Grade eighth students among nine primary schools of the Dessie city administration.

Table 1:*Population and Sample Size of the Study by Schools*

No	School Name	No. Sections	Total Population	Sample Size
			No	No
1	School 1	3	161	103
2	School 2	3	138	88
3	School 3	2	136	87
4	School 4	2	175	113
5	School 5	2	82	52
6	School 6	4	229	146
7	School 7	4	223	143
8	School 8	3	141	90
9	School 9	3	169	108
Total			1454	930

Source: *Dessie city education office, 2023/24*

3.5. Data Collection Techniques and Procedures

3.5.1. Data Collection Techniques

The study used a questionnaire as a data collection instrument. In this regard, Creswell (2014) explains that quantitative research is an approach for testing objective theories through examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numerical data can be analyzed using statistical procedures. Thus, to examine phenomena of interest objectively, the researcher adapted standardized questionnaires that allow the researcher to measure carefully what is observed.

Moreover, the questionnaires were originally available in English. So, initially, the researcher, with a colleague who is a Ph.D. holder in linguistics (a staff member of

the linguistics department at Wollo University), translated it into Amharic and turned it back into English. The two English versions were compared, and the consistency of translations was assured. Then, the translation was reviewed in terms of meaning and word selection according to the original text by two scholars in the field of educational psychology (Wollo University). More importantly, the process was commented on by research advisors. The comments were used to improve the questionnaire. The above-mentioned procedures contributed to validating the present data collection instrument.

The Amharic translation was made in the hope of increasing participants' understanding and reflection on each question because the language is their mother tongue. Thus, the Amharic version was pilot tested and used for further steps in the main research. The following section clearly showed information about adapted instruments on the variable of interest of the research. Regarding this, Creswell (2014) stated that as part of rigorous data collection, the researcher should provide detailed information about the actual survey instruments used in the study.

Academic Help-Seeking Behaviors Questionnaire

The academic help-seeking behaviors questionnaire (AHSBQ) was adapted from College Algebra Help Seeking Scales: CAHSS (China, 2020), which was originally designed to assess academic help-seeking behaviors of students enrolled in a computer science course (Pajares et al., 2004). Pajares et al. (2004) stated that the computer science help-seeking scales (CSHSS) could be adapted for use in other academic areas; thus, the study adapted the wording of the CSHSS to assess students' academic help-seeking behavior to resolve difficulties in the mathematics subject.

The College Algebra Help Seeking Scales (CAHSS) consists of three scales, namely, Instrumental, Executive, and Avoidance of help seeking. Instrumental help-seeking consists of 5 items that show students' tendency to ask for limited help when needed, which enables them to solve the problem on their own. Executive help-seeking consists of 5 items, which show students' interest in obtaining ready-made answers rather than trying to solve the problem on their own. Avoidance of help-seeking consists of 9 items, which show students' tendency not to ask for help when it is needed to resolve their learning difficulties. Items on these scales are rated on a five-point Likert-type scale with responses ranging from 1 = not at all true to 5 = very true. Higher scores indicate higher instrumental, executive, and avoidance of help-seeking.

Regarding reliability analysis, China (2020) found high Cronbach coefficient alphas of 0.88, 0.97, and 0.95 for the instrumental, executive, and avoidance of help-seeking scales, respectively. Moreover, Pajares et al. (2004) also found high Cronbach's alpha coefficients of 0.89, 0.92, and 0.86 for the Instrumental, Executive, and Avoidance of Help Seeking scales, respectively. Thus, the above reliability results make clear that the adapted instrument (AHSBQ) was found to be a reliable instrument. In addition, indices obtained from confirmatory factor analysis in this research ($\chi^2/df = 3.57$, SRMR = .023, CFI = .97, TLI = 0.96, RMSEA = 0.053) indicated the appropriate fit of the model with the data (see Table 8).

Attitude towards Help-Seeking Questionnaire

Attitude towards Help Seeking Questionnaire (ATHSQ) was adapted from the Mathematics Learning in the Classroom Questionnaire (MLCQ) (Newman, 1990). The MLCQ items are developed on the basis of previous works of Newman (1982), Newman

& Goldin (1990), Parsons (1980), and Pintrich (1989). The MLCQ consists of four sections concerning mathematics learning: (1) perception of the classroom environment, (2) classroom strategies, (3) attitudes and beliefs about help seeking, and (4) attitudes, beliefs, and goals about math achievement in general. However, this research focused on items from the third section that assessed students' attitude towards help-seeking. The format of the items was a 5-point rating scale, ranging from (1) not at all true of me to (5) very true of me (Newman, 1990).

The scale consists of eight items designed to measure the students' attitudes towards help-seeking, which measures both the benefits and costs of help-seeking in learning mathematics. The benefits of help-seeking consist of 3 items, which indicate the potential role of seeking help for learning; whereas costs of help-seeking consist of 5 items, which indicate potential threat caused by seeking help to their self-worth. On the scales, Newman (1990) reported the reliability of benefits of help-seeking and potential costs of help-seeking in math class with Cronbach's alpha coefficient of 0.65 and 0.74, respectively.

Similarly, Ryan et al. (1997) also reported reliability analysis indicated with Cronbach's alpha coefficients of .79 and .87 for perceived benefits and cost of help seeking. Roussel et al. (2011) also reported reliability analysis indicated with Cronbach's alpha coefficients of .85 and .91 for perceived benefits and cost of help seeking, respectively. Indices obtained from confirmatory factor analysis also indicated that ($\chi^2/df = 1.76$, CFI = .99, IFI = 0.99, RMSEA = 0.057) confirmed the appropriate fit of the model. Moreover, indices obtained from confirmatory factor analysis in this research

($\chi^2/df = 3.94$, SRMR = .024, CFI = .98, TLI = 0.97, RMSEA = 0.056) suggested the appropriate fit of the model with the data (see Table 8).

Social Goals Orientation Questionnaire

The Social Goal Orientation Questionnaire (SGOQ) was adapted from Ryan et al. (1997), which was originally derived by Hicks and Murphy (1995) and Hicks, *et al.* (1995). The format of items was a 5-point scale, ranging from 1 = *not at all true* to 5 = *very true*. The scale consists of ten items that enable the researcher to assess social intimacy goals (6 items) and social status goals (4 items). Intimacy goals refer to students' desire to form positive relationships with their peers in school (e.g., "I would like to get to know my school friends well"). On the other hand, social status goals refer to students' desire to gain social status through membership in the popular group at school (e.g., "It is important to me to belong to the popular group at school").

While Ryan et al. (1997) reported reliability with alpha coefficients of .60 and .65 for the intimacy goal and status goals, respectively, Hashemi and Shokrkon (2009); as cited in Zarrin et al. (2016) has also reported reliability with Cranach's alpha (0.77) and (0.67) and with split-half method (0.61) and (0.60) for intimacy goal and status goals respectively. Moreover, Guan et al. (2006) revealed that the social goal model represented an acceptable fit of (CFI = .93, TLI = .91, and RMSEA = .08). Indices obtained from confirmatory factor analysis in this research ($\chi^2/df = 2.33$, SRMR = .016, CFI = .99, TLI = 0.99, RMSEA = 0.038) indicated the considerable and significant contribution of each of the items in measuring Social goal orientation (see Table 8).

Social Skill Questionnaire

The study adapted the Social Skill Questionnaire (SSQ) from Eslami et al. (2014), which was originally derived from the social skills rating systems child version (SSRS-C: Gresham & Elliot, 1990). The social skills rating system (SSRS; Gresham & Elliot, 1990) was designed to assess social behavior that can affect students' academic performance, peer acceptance, and teacher-student interaction. The scale measures the frequency and importance of students' (of 3 to 18 years) social and adaptive behaviors at school and at home. It is one of the most widely used behavior rating scales to assess social skills.

The social skills rating system (SSRS) is a multi-rater instrument with a child, parent, and teacher version, for the assessment of social skills dimensions in children. All three versions of the SSRS are rated on a 3-point Likert scale ranging from 1 (never) to 3 (often) Gresham et al. (2011); however, this research adapted a child version for the assessment of their social skills. Higher scores indicate better social skills, and lower scores indicate a social skills problem.

Regarding, adapted instrument, SSRS-C Eslami et al. (2014) explain that this SSRS-C consists of 4 subscales, which are designed to assess students' cooperation, assertion, self-control, and empathy behaviors. The scale consists of a total of 27 items, in which cooperation, assertion subscales each contained 6 items, the self-control subscale contained 8 items, and the final subscale, empathy, contained 7 items. Eslami et al. (2014) also reported that the total scale and subscales appeared to be stable and internally consistent. Internal consistency reliability of the total SSRS scale was 0.89. Cronbach's alpha coefficients for the four subscales ranged from 0.72 to 0.83 ($p < 0.001$);

with self-control having 0.83, empathy having 0.78, assertion having 0.82, & cooperation having 0.72.

Moreover, the SSRS-C has extensive psychometric data and has been demonstrated to be reliable and valid. Gresham and Elliott (1990), as cited on Shahim (2004), indicated that the estimates of internal consistency reported in the SSRS manual ranged from .83 to .94 for the full social skill scale scores across all forms. The median coefficient alpha found was .90 for social skills at all ages for a sample of children. Gresham and Elliott (1990) also reported test-retest reliability estimates (over 42 to 66 days) were .81 for the total social skills scores for the students' version. Indices obtained from confirmatory factor analysis in this research ($\chi^2/df = 2.59$, SRMR = .025, CFI = .96, TLI = 0.95, RMSEA = 0.042) suggested the appropriate fit of the model with the data (see Table 8).

Mathematics Achievement

Students' mathematics achievement was retrieved from official school documentation. Estimated results were based on work in lessons and class tests using a continuous assessment method, which includes tests, assignments, a mid-term exam, and a final exam. The result indicates that students perform in the mathematics subject out of 100, with higher scores reflecting better mathematics achievement. Then, the researcher considered students' achievement scores as a measure of their mathematics achievement.

3.5.2. Data collection procedures

After obtaining institutional approval, a series of data-gathering procedures was employed. First, the researcher established an official relationship with the concerned bodies of the Dessie city administration, education office officials, and directors of

primary schools under study. Next, before participants started to respond to the questionnaires, the participants were informed a) the purpose of the study, (b) there are no right and wrong answers in the questionnaires, (c) the instruments were used only to gather information for research and they were not linked to any form of classroom evaluation and (d) the information obtained would be kept completely confidential.

Following the orientations, the questionnaires were administered by the researchers and assistant data collectors; students took approximately 40 minutes, on average, to complete the questionnaires. The data were collected in classrooms during class hours and taken over a month. In the process of data collection, the researcher carefully monitored and encouraged students to answer questions as necessary, which reflected their behavior or beliefs as per the instructions. To minimize students' tendency to fill out questionnaires carelessly, the researchers encouraged the students to answer as truthfully as they could and informed them of the importance of their response to the study. They were also informed that their teachers would not have access to their responses and assured them that their responses would not affect their grades.

3.6.Instrument Validation

Although the instruments used in this study were originally standardized and have been widely employed in psychological and educational research, it was essential to evaluate their validity and reliability within the specific context of this study. To ensure their appropriateness and accuracy for the target population, a two-step process was undertaken. First, a pilot study was conducted to preliminarily test the instruments, allowing the researchers to identify any issues related to clarity, cultural relevance, or measurement consistency. Based on the pilot results, necessary modifications were made

to improve the instruments. Subsequently, the revised instruments were administered in the main study, and statistical analyses such as reliability coefficients (e.g., Cronbach's alpha) and validity (convergent and discriminant validity) were performed.

3.6.1. Pilot Test and Reliability of Instruments

The researcher conducted a pilot test on the adapted instruments. As suggested by Cohen et al. (2011), piloting data collection instruments is of paramount importance for increasing the validity and reliability of the instruments used. Accordingly, in order to examine phenomena of interest objectively, the researcher adapted standardized questionnaires that allow the researcher to carefully measure what is observed. The research adapted instruments for all constructs except mathematics achievement. In this regard, social skill has four dimensions consisting of 27 items, social goal orientation has two dimensions consisting of 10 items, academic help-seeking behavior has three dimensions consisting of 19 items, and attitude towards help-seeking has two dimensions consisting of 8 items. Consequently, the adapted questionnaires were pilot tested.

First, the instruments were reviewed by the research advisors and experienced academic staff at Wollo University for relevance and clarity. Following their comments and suggestions, some items were modified. The final reviewed, adapted, and standardized Amharic version instrument was pilot tested. Concerning the selection of the sample size for the pilot study, there is no agreed-upon rule of thumb to be adopted. Baker (1994) stated that a sample size of 10-20% of the final participant sample size is a proper proportion to be enrolled in the pilot study (cited in Van Teijlingen & Hundley, 2002). Consequently, the researcher was considering 20% of the total participants for the pilot study. Therefore, the questionnaires were pilot tested with a sample of 200 students

in randomly selected non-sampled primary schools; participants were not part of the final study.

The collected data for the pilot test were analyzed using the SPSS package in order to assess reliability. Internal consistency was used as an indicator of a scale's reliability, whereas Cronbach's alpha coefficient was used as an indicator of internal consistency. Consequently, Cronbach's alpha coefficients were calculated to examine the internal consistency (reliability) of test scores. Coefficients around .70 are considered adequate, and below .50 should be unreliable because it indicates that at least 50% of the observed variance is associated with random measurement error (Keith, 2019).

The results were evaluated through Cohen et al. (2007) evaluation criteria of Cronbach's coefficient (α) index. They state that $0.9 \leq \alpha$ is deemed excellent, $0.7 \leq \alpha < 0.9$ good, $0.6 \leq \alpha < 0.7$ acceptable, $0.5 \leq \alpha < 0.6$ poor; $\alpha < 0.5$ unacceptable. Accordingly, the result of reliability shows that on dimension of academic help seeking behavior on avoidance of help-seeking, items 4 & 7 adversely influence value reliability; then deleting these items enhances reliability value to .80. Moreover, the dimension of social skill on self-control behavior item 5 adversely influences value reliability then deleting this item enhances reliability value to .90. These processes were providing good Cronbach's alpha coefficients for instruments that assessed the specified constructs.

The internal consistency Cronbach's alpha coefficients of the instruments in this study were found as follows: social skill (self-control has 0.90, empathy has 0.88, assertion has 0.87, & cooperation has 0.89), social goal orientation (intimacy goal has 0.91 and status goals has 0.79), academic help-seeking behavior (instrumental help-seeking 0.83; executive help-seeking 0.73, and avoidance of help-seeking 0.80) and

attitude towards help-seeking (benefits of help-seeking has 0.82 and costs of help-seeking has 0.89). Table 2 presents a summary of reliability indices statistics. In general, the result of the reliability analysis of the pilot test showed that the Cronbach alpha coefficients of the instruments were above the recommended value, which confirmed that the instruments have acceptable levels of reliability indexes.

Table 2:

Reliability Indices of Instruments (Pilot Test)

Scale	Dimension	Cronbach's alpha (α)	No of Items	Remark
ATHS	BHS	0.81	3	<i>Adapted</i>
	CHS	0.89	5	<i>Adapted</i>
AHSB	HIS	0.83	5	<i>Adapted</i>
	EHS	0.73	5	<i>Adapted</i>
	AHS	0.80	7	<i>Adapted</i>
SGO	SIG	0.91	6	<i>Adapted</i>
	SSG	0.79	4	<i>Adapted</i>
SS	CB	0.90	6	<i>Adapted</i>
	AB	0.87	6	<i>Adapted</i>
	SCB	0.89	7	<i>Adapted</i>
	EB	0.88	7	<i>Adapted</i>

Note: BHS=Benefits of help-seeking, CHS=costs of help-seeking, HIS=Instrumental help seeking, EHS=Executive help-seeking, AHS=Avoidance of help-seeking, SIG=Social Intimacy goal, SSG=Social status goals, SCB=self-control behavior, EB=empathy behavior, AB=assertion behavior, and CB= cooperation behavior

3.6.2. Analysis of Measurement Model

The measurement model was examined to assess model fit, and scales' reliability and validity (Hair et al., 2022). The measurement models were examined for all the exogenous variables and endogenous variables separately. In the proposed model, the

measurement model consisted of 4 latent constructs and eleven indicators. Specifically, the exogenous latent constructs: The Social Skill Scale had four indicators, and the Social Goal Orientation Scale had two indicators; the endogenous latent constructs, the Academic Help Seeking Behavior Scale had three indicators, and the Attitude towards Help Seeking Scale had two indicators.

The first step in assessing the measurement model was reliability analysis. Reliability refers to the consistency of measurement tools and indicates the extent to which indicators measuring the same construct are correlated (Keith, 2019). Internal consistency coefficients were calculated to assess the reliability of the constructs at both the first- and second-order levels. Accordingly, at the first-order level, reliability was evaluated based on the items of each subscale, whereas at the second-order level, it was assessed based on the indicators representing the higher-order constructs.

Cronbach's alpha (α), McDonald's Omega (Ω), and Composite Reliability (CR) were used as measures of reliability in this study. At the first-order construct level, the results show that Cronbach's alpha values ranged from 0.840 to 0.927, Omega values from 0.838 to 0.926, and CR values from 0.89 to 0.94 (see Table 3). Similarly, at the second-order construct level, Cronbach's alpha values ranged from 0.73 to 0.80, Omega values from 0.725 to 0.80, and CR values from 0.81 to 0.89 (see Table 3). The reliability analysis showed consistently high values across Cronbach's alpha, McDonald's Omega, and Composite Reliability. All constructs exceeded the recommended threshold of 0.70 at both first- and second-order levels. This confirms that the measurement model demonstrates strong internal consistency and reliability (Loh et al., 2021).

Table 3:*Results of Reliability and Convergent Validity*

First order Construct	Second order Constructs	No of items/ indicator	α	Ω	CR	AVE
AB		6	0.871	0.870	0.903	0.607
CB		6	0.865	0.865	0.899	0.598
EB		7	0.883	0.881	0.909	0.588
SCB		7	0.893	0.892	0.916	0.610
SIG		6	0.915	0.915	0.934	0.702
SSG		4	0.881	0.885	0.918	0.737
BHS		3	0.872	0.872	0.921	0.796
CHS		5	0.840	0.838	0.886	0.609
AHS		5	0.898	0.897	0.914	0.621
EHS		5	0.861	0.860	0.899	0.643
HIS		7	0.927	0.926	0.945	0.774
	SS	AB				
		CB	0.77	0,763	0.86	0.60
		EB				
		SCB				
	SGO	SIG				
		SSG	0.80	0.80	0.85	0.83
	ATHS	BHS				
		CHS	0.78	0.774	0.89	0.81
	AHSB	AHS				
		EHS	0.73	0.725	0.81	0.59
		HIS				

Notes: AB = Assertion behavior; CB = Cooperation behavior; SCB = Self-control behavior; EB = Empathy behavior; SIG = Social intimacy goal; SSG = Social status goal; BHS =Benefit of help seeking; CHS = Cost of help Seeking; IHS = Instrumental help seeking; EHS = Executive help seeking; AHS = Avoidance Help seeking, SS = Social skill, SGO = Social goal orientation, ATHS = Attitude towards help seeking AHSB = Academic help seeking behavior.

Following the assessment of reliability, the next issue addressed is validity. To establish construct validity, both convergent and discriminant validity were examined at the first- and second-order construct levels. Conceptually, convergent validity assesses whether indicators converge to measure a single construct, whereas discriminant validity determines whether a construct is distinct and unrelated to other constructs (Collier, 2020). Convergent validity is considered adequate when the Average Variance Extracted (AVE) is at least 0.50 and Composite Reliability (CR) exceeds 0.70 (Fornell & Larcker, 1981).

As shown in Table 3 above, the AVE values for the measurement items within the first-order constructs ranged from 0.588 to 0.737, and the CR values ranged from 0.886 to 0.945. Similarly, the AVE and CR values for the second-order constructs social skill, social goal orientation, attitude towards help seeking, and academic help-seeking behavior were 0.60, 0.83, 0.81, and 0.59, and 0.86, 0.85, 0.89, and 0.81, respectively (see Table 3). At both the first- and second-order levels, all CR values exceeded the recommended threshold of 0.70, and all AVE values were above 0.50, indicating good convergent validity (Fornell & Larcker, 1981).

Furthermore, concerning the assessment of discriminant validity (DV), both the Fornell–Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT) were employed. Discriminant validity was evaluated at both the first- and second-order levels. Specifically, at the first-order level, DV was assessed based on the subscales or dimensions of the constructs, whereas at the second-order level, it was evaluated based on the main constructs. According to the Fornell–Larcker criterion, discriminant validity is established when the square root of the Average Variance Extracted (AVE) for each

construct exceeds the corresponding inter-construct correlation coefficients (Fornell & Larcker, 1981). Similarly, under the HTMT criterion, discriminant validity is confirmed when the HTMT ratio of correlations is below the predefined threshold of 0.85 (Collier, 2020).

As shown in Table 4, at the first-order level, the square root of the AVE for each construct is greater than the respective inter-construct correlation coefficients, and the HTMT values are below the recommended threshold of 0.85, indicating acceptable discriminant validity (see Table 5). Likewise, at the second-order level, the square root of the AVE for each construct exceeds the inter-construct correlation coefficients (see Table 6), and the HTMT values remain below 0.85, further confirming discriminant validity (see Table 7).

Table 4:*The discriminant validity (First-Order Constructs) Fornell–Larcker criterion*

	AB	AHS	BHS	CB	CHS	EB	EHS	IHS	SCB	SIG	SSG
AB	<i>0.779</i>										
AHS	-0.162	<i>0.788</i>									
BHS	0.466	-0.435	<i>0.892</i>								
CB	0.385	-0.051	0.529	<i>0.773</i>							
CHS	-0.155	0.578	-0.64	-0.135	<i>0.780</i>						
EB	0.403	-0.176	0.578	0.503	-0.106	<i>0.766</i>					
EHS	-0.173	-0.500	-0.153	-0.233	-0.081	-0.156	<i>0.802</i>				
IHS	0.406	-0.549	0.795	0.497	-0.465	0.518	-0.247	<i>0.88</i>			
MA	0.469	-0.492	0.810	0.482	-0.554	0.557	-0.259	0.866			
SCB	0.411	-0.248	0.641	0.618	-0.225	0.493	-0.096	0.562	<i>0.781</i>		
SIG	0.520	-0.257	0.685	0.616	-0.217	0.633	-0.252	0.708	0.635	<i>0.838</i>	
SSG	-0.309	0.289	-0.51	-0.345	0.363	-0.358	0.152	-0.513	-0.377	-0.670	<i>0.862</i>

Note: Bold & Italics in the main diagonal represent the square root of AVE

Table 5:*Discriminant validity (First-Order Constructs) Heterotrait-Monotrait Ratio criterion*

	AB	AHS	BHS	CB	CHS	EB	EHS	IHS	MA	SCB	SIG
AB											
AHS	0.182										
BHS	0.534	0.491									
CB	0.444	0.061	0.608								
CHS	0.180	0.664	0.748	0.157							
EB	0.460	0.198	0.659	0.575	0.123						
EHS	0.199	0.569	0.176	0.269	0.096	0.179					
IHS	0.451	0.602	0.784	0.554	0.527	0.572	0.276				
MA	0.503	0.519	0.767	0.517	0.604	0.593	0.278	0.721			
SCB	0.467	0.277	0.726	0.703	0.26	0.555	0.109	0.618	0.581		
SIG	0.583	0.282	0.767	0.692	0.247	0.704	0.283	0.768	0.752	0.702	
SSG	0.352	0.324	0.581	0.395	0.420	0.405	0.173	0.566	0.576	0.425	0.744

Table 6:*Discriminant Validity (Second-Order Constructs) Fornell–Larcker criterion*

	Constructs	1	2	3	4
1	AHSB	0.769			
2	ATHS	0.653	0.900		
3	SGO	0.619	0.548	0.913	
4	SS	0.578	0.579	0.691	0.777

Note: - Bold & Italic in the main diagonal represent the square root of AVE, SS = Social skill, SGO = social goal orientation, ATHS = attitude towards help seeking, and AHSB = academic help-seeking behavior

Table 7:*Discriminant Validity (Second-Order Constructs) Heterotrait-monotrait Ratio criterion (HTMT)*

	Constructs	1	2	3	
1	AHSB				
2	ATHS	0.790			
3	MA	0.822	0.821		
4	SGO	0.816	0.678	0.771	
5	SS	0.801	0.647	0.751	0.812

Finally, following the assessments of reliability and validity, model fit was evaluated at both the first-order and second-order levels for each measurement model using Covariance-Based Structural Equation Modeling (CB-SEM) in Smart PLS 4. This analysis assesses how well the overall structure of the measurement model fits the observed data. Although Smart PLS 4 offers various model fit statistics, researchers commonly rely on five key indices: a) Chi Square value divided by the degrees of freedom χ^2/df , b) Comparative Fit Index (CFI) c) Root-Mean-Square-Error-of-Approximation (RMSEA), d) Standardized Residual Mean Square Root (SRMR) and e) Tucker Lewis Index (TLI) (Byrne, 2013; Collier, 2020). Thus, the research used these model fit indices to assess the model fit of the sample data. Accordingly, a good model fit

is indicated by a χ^2/df value of < 5 (Hu & Bentler, 1999), SRMR $< .08$ & RMSEA $< .08$ (Hu & Bentler, 1999), CFI/TLI values of ≥ 0.90 (Bentler & Bonett, 1980).

Accordingly, an acceptable model fit should demonstrate: $(\chi^2)/df < 5$ (Hu & Bentler, 1999), SRMR $< .08$ & RMSEA $< .08$ (Hu & Bentler, 1999), and CFI, & TLI > 0.9 (Bentler & Bonett, 1980). Accordingly, the confirmatory factor analysis (CFA) indicated an acceptable fit of the data to the first-order measurement models for both exogenous latent variables: social skill ($\chi^2/df = 2.59$, SRMR = .025; CFI = .96; TLI = .95; RMSEA = .042) and social goal orientation ($\chi^2/df = 2.335$, SRMR = .016; CFI = .99; TLI = .99; RMSEA = .038), and endogenous latent variables: academic help seeking behavior ($\chi^2/df = 3.335$, SRMR = 0.020, CFI = 0.974, TLI = 0.969, RMSEA = 0.050) and attitude towards help seeking ($\chi^2/df = 3.94$, SRMR = .024; CFI = .984; TLI = .977; RMSEA = .056) (see Table 8).

Similarly, the second-order constructs in the measurement model demonstrated a good fit to the data for both exogenous latent variables: social skill ($\chi^2/df = 2.614$, SRMR = 0.029, CFI = 0.959, TLI = 0.955, RMSEA = 0.042) and social goal orientation ($\chi^2/df = 2.406$, SRMR = 0.016, CFI = 0.992, TLI = 0.989, RMSEA = 0.039) as well as for the endogenous latent variables academic help-seeking behavior ($\chi^2/df = 3.335$, SRMR = 0.020, CFI = 0.974, TLI = 0.969, RMSEA = 0.050) and attitude towards help-seeking ($\chi^2/df = 4.165$, SRMR = 0.024, CFI = 0.984, TLI = 0.975, RMSEA = 0.059) (see Table 8).

The results of the confirmatory factor analysis (CFA) indicated that the measurement model demonstrated an acceptable fit to the data at both the first-order and second-order levels. At the first-order level, all latent constructs were adequately

represented by their observed indicators, supporting the reliability of the individual measurement models. At the second-order level, the higher-order constructs also showed acceptable model fit, confirming the validity of the broader conceptual structure. These results suggest that the overall measurement model is well-specified and suitable for further structural analysis.

Table 8:

Model fit indices of the confirmatory factor analyses for the Measurement Models

Constructs	Model	χ^2/df	SRMR	CFI	TLI	RMSEA
Social Skill	First order	2.592	0.025	0.960	0.956	0.042
	Second order	2.614	0.029	0.959	0.955	0.042
Social Goal Orientation	First order	2.335	0.016	0.99	0.99	0.038
	Second order	2.406	0.016	0.992	0.989	0.039
Attitude Towards Help Seeking	First order	3.946	0.024	0.984	0.977	0.056
	Second order	4.165	0.024	0.984	0.975	0.059
Academic Help-Seeking Behavior	First order	3.335	0.020	0.974	0.969	0.050
	Second order	3.335	0.020	0.974	0.969	0.050

Note: $(\chi^2)/df$ = chi-square/degree of freedom; CFI = Comparative fit index; RMSEA = Root mean-square error of approximation; SRMR = Standardized residual mean square root; TLI = Tucker Lewis index

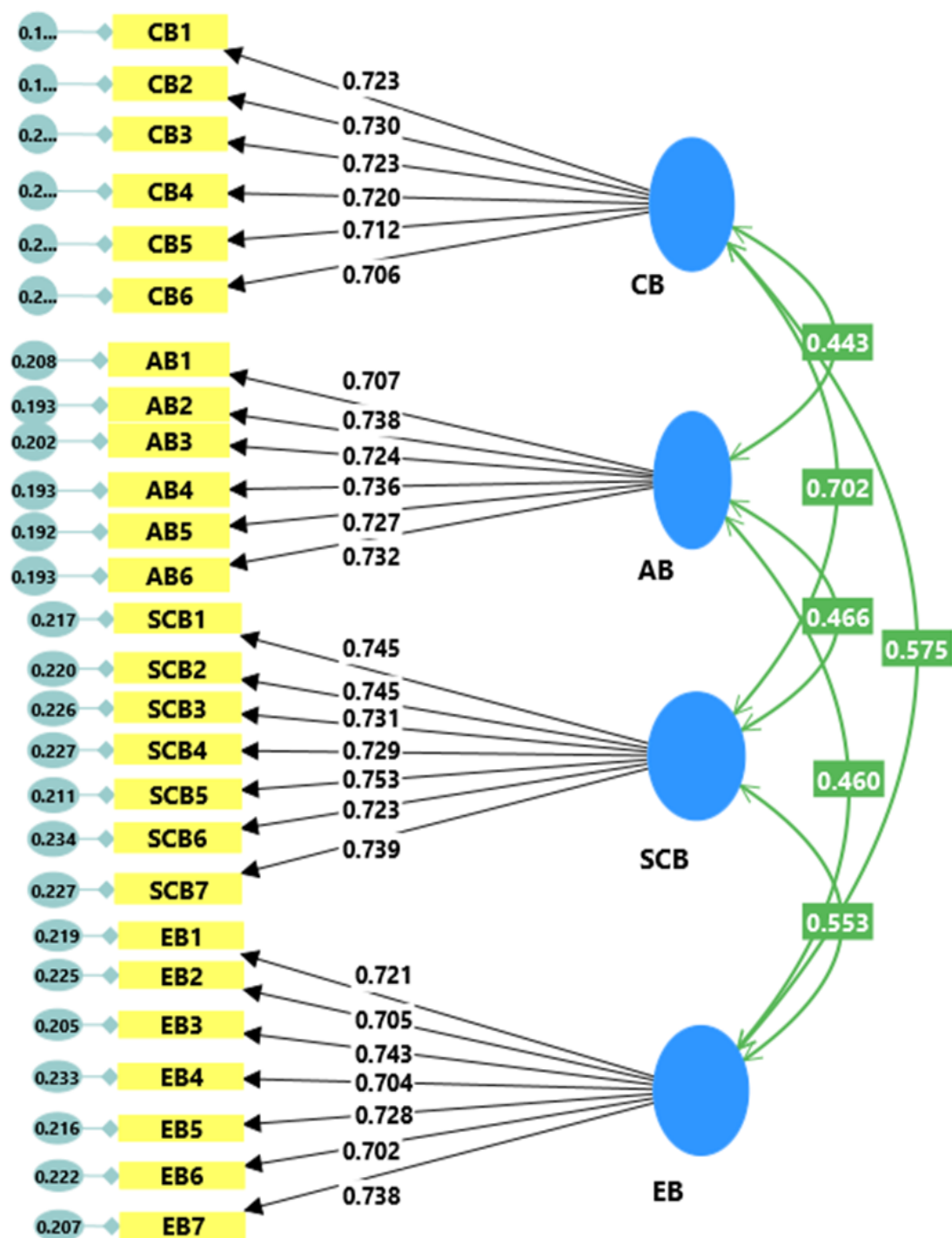


Figure 4: CFA Model of Social Skill Scale

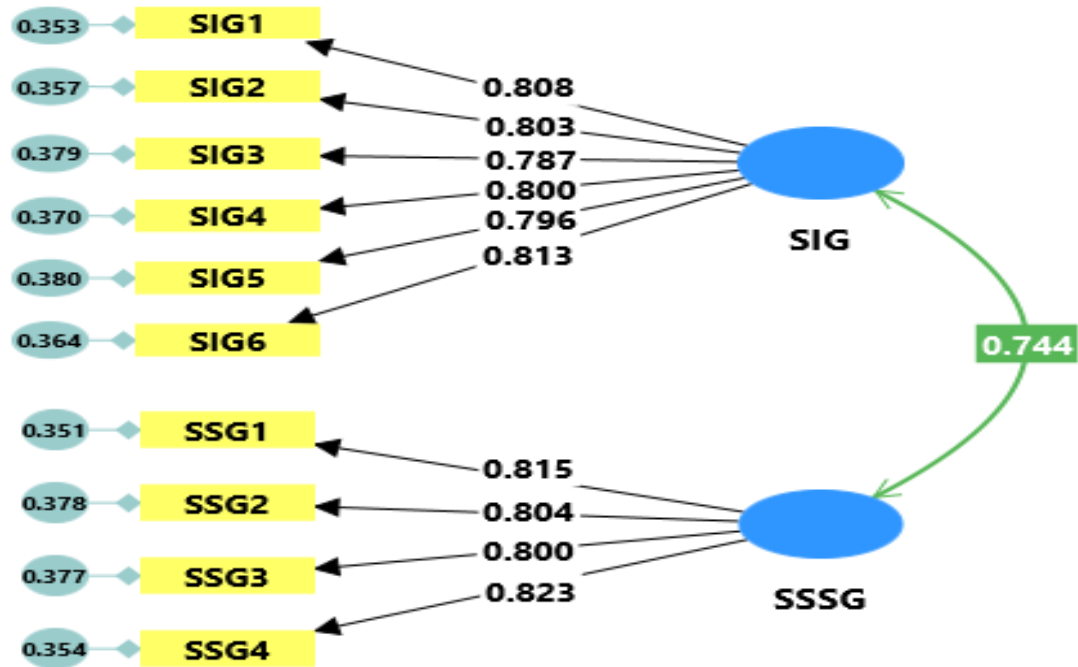


Figure 5: CFA Model of Social Goal Orientation Scale

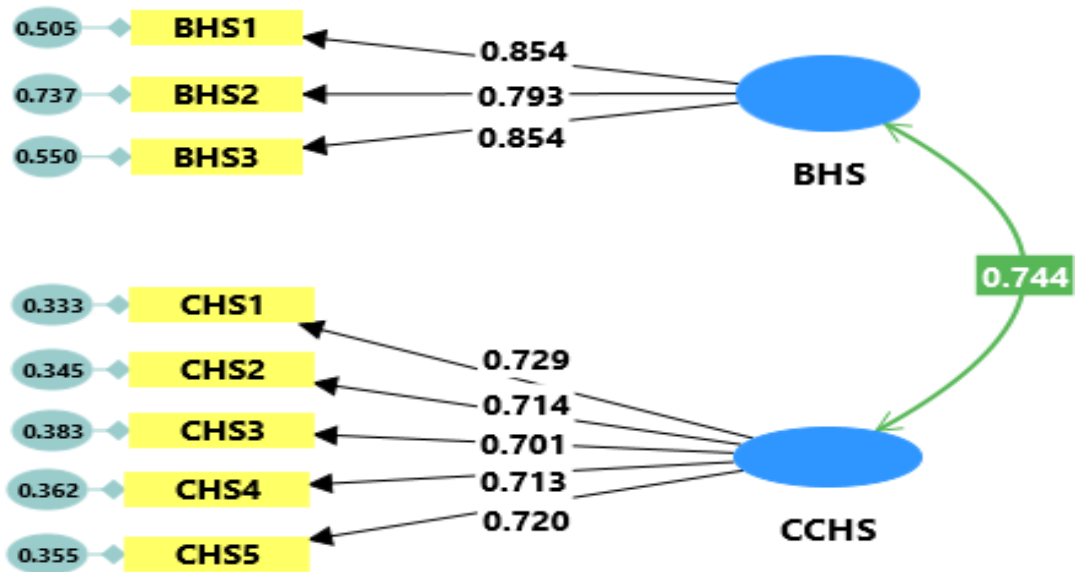


Figure 6: CFA Model of Attitude towards Help seeking Scale

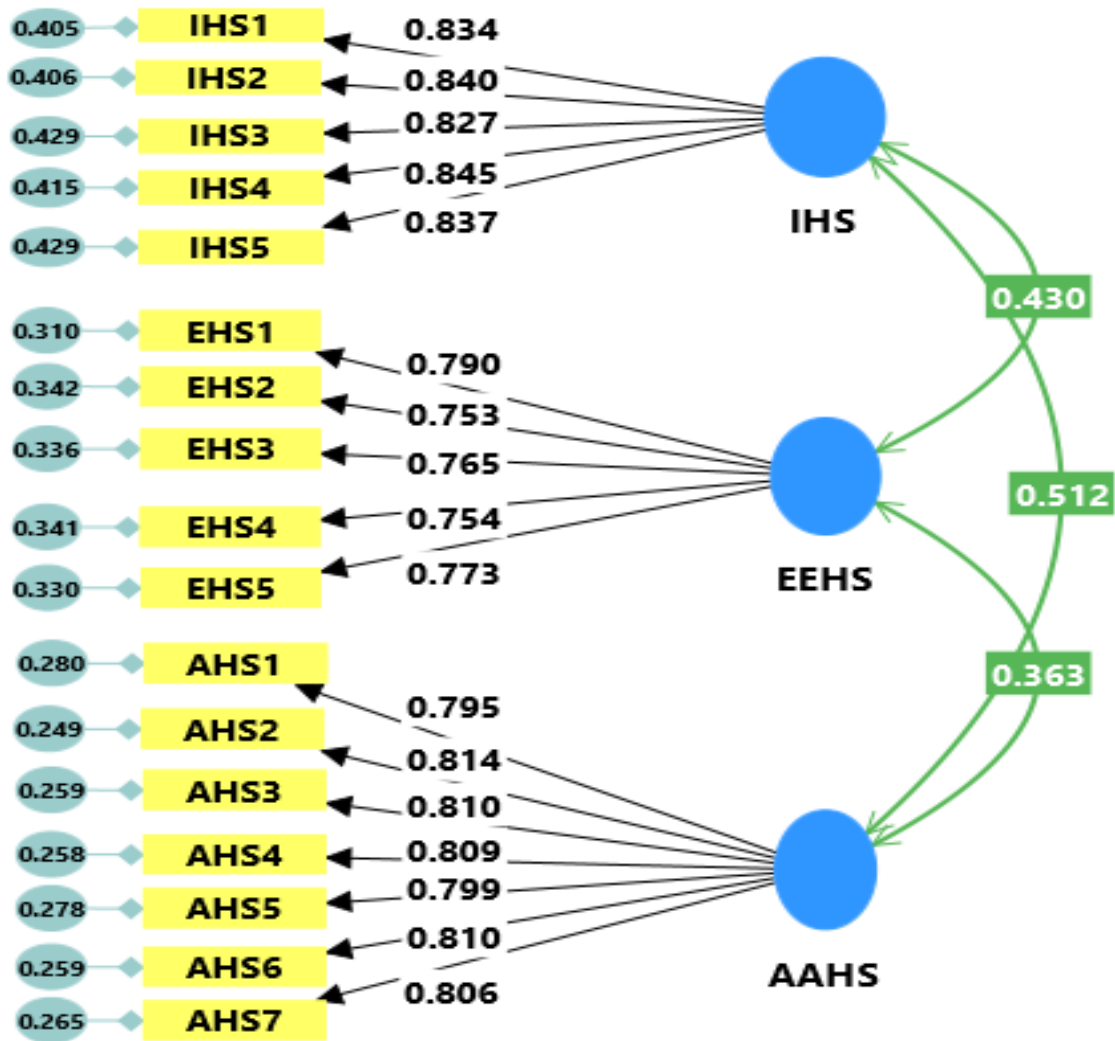


Figure 7: CFA Model of Academic Help Seeking Behavior Scale

3.7. Data Analysis Techniques

After administering and scoring research tool scripts, data were collected and organized; the researcher analyzed the raw data to make it meaningful. As noted by Creswell (2014), the raw data are meaningless unless certain statistical treatment is given to them. Accordingly, to test research questions, the study utilized a correlational design so that the analysis of data was done in line with research questions. Indeed, first, the researcher attempted to manage papers that had imperfect information. Then the ones who filled in the measuring tools were included in the study, and their data entries were made.

Preliminary analyses were examined, such as outliers, normality, absence of Multicollinearity, and linearity using SPSS programs.

In addition, before testing the full structural model, the measurement model was examined to assess model fit, reliability, and validity. The measurement models were examined for all the exogenous variables and endogenous variables separately. A confirmatory factor analysis (CFA) was conducted for each scale of exogenous and endogenous latent variables separately using covariance-based SEM (CB-SEM) in Smart PLS 4 (Hair et al., 2022). The model fit was evaluated at both the first and second order levels. To evaluate measurement model fit, five main techniques were used: chi-square/degree of freedom (χ^2/df), comparative fit index (CFI), Root mean-square error of approximation (RMSEA), Standardized residual mean square root (SRMR), and Tucker Lewis index (TLI) (Byrne, 2013; Collier, 2020).

Moreover, the research evaluates reliability at first and second order levels using Omega (Ω) and Cronbach's alpha (α) coefficients. Reliability statistics above the recommended threshold of 0.70 indicated that the data collected exhibit good reliability indexes (Loh et al., 2021). Further, convergent and discriminant validity were evaluated at first and second order levels to confirm the construct validity of the measurement instruments. Convergent validity was assessed using the Factor Loading (FL) and Average Variance Extracted (AVE), where FL values exceeding the threshold value of 0.7 and AVE exceeding 0.5 indicate good convergent validity (Collier, 2020).

Discriminant validity was examined using the Fornell–Larcker criterion and Heterotrait-monotrait Ratio Statistics (HTMT). The Fornell–Larcker criterion suggested that the square root of AVE in each construct should be greater than the correlation

coefficient value, indicating acceptable discriminant validity (Fornell & Larcker, 1981). Whereas, HTMT as a criterion suggested that the value of the HTMT ratio of correlation should be below 0.85, confirming discriminant validity (Collier, 2020; Hair et al., 2022).

Following the successful evaluation of measurement instruments, the full structural model was tested. The study employed Structural Equation Modeling (SEM) to test a proposed model examining the mediating roles of attitude toward help-seeking and academic help-seeking behavior in the relationship between students' social skills, social goal orientation, and mathematics achievement. SEM was chosen for its ability to analyze complex relationships among multiple variables simultaneously (Collier, 2020). Using Smart PLS 4 with the bootstrap method, the research applied Partial Least Squares Structural Equation Modeling (PLS-SEM) to evaluate both direct and indirect effects within the model (Benitez et al., 2020). This approach allowed for robust estimation and prediction of relationships among constructs, providing a comprehensive understanding of how social motivational factors influence students' mathematics achievement via dimensions of help seeking constructs (attitude towards help seeking and academic help seeking behavior).

3.8. Ethical Considerations

Ethical consideration was seriously taken into account through the process of conducting the research. Initially, the study was evaluated and approved by the Institutional Research Review Committee (**IRRC**) of Bahir Dar University, Ethiopia, issuing an approval report: **00212**, under the supervision of dissertation research advisors. Then, before starting to conduct the study, permission was obtained from the selected study area administrator, the Dessie City Administration Education Office. To do so, the researcher

was provided with an official letter written by the Department of Psychology, BDU, to the Dessie City Administration Education Office.

Moreover, students were asked to participate in the research voluntarily without physical or psychological coercion. Before administering the questionnaire, the objectives of the study were clearly explained to the participants, and oral informed consent was obtained. They were assured that the information they provided would be used only for research purposes. Above all, as part of the responsibility to ensure the safety and welfare of students participating in research, the researcher had a moral obligation to avoid any harm in the sessions of the data collection process. In this regard, assistant data collectors were given training on the research ethics, such as ensuring the safety of participating students, respecting the participants' rights, and maintaining the confidentiality of information obtained. Thus, confidentiality and anonymity were ensured throughout the execution of the study.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

This study was conducted to examine the mediating role of dimensions of help-seeking variables (academic help-seeking behavior and attitudes towards help-seeking) in explaining the relationship between students' motivational orientation (social skill and social goal orientation) and mathematics achievement. Data were collected through adapted standardized questionnaires. In this chapter, the results of the study were presented and analyzed based on the research questions. A discussion of data screening procedures precedes the presentation of descriptive statistics and correlation among the variables of the study. Statistical procedures and results are then presented that show the direct and indirect roles of variables on students' mathematics achievement based on the hypothesized conceptual framework.

4.1. Preliminary Data Cleaning and Assumptions Testing

Before conducting the primary analyses to address the research questions, data were screened and analyzed. The screening was conducted to establish a description of the sample while testing to ensure that statistical assumptions were met for the primary analyses. Accordingly, the research used SEM in order to test a hypothetical conceptual framework using the Smart PLS 4 program. Moreover, SEM is an extension of the General Linear Model (GLM) that enables testing a set of regression equations simultaneously.

Thus, the assumptions that apply to the regression models are valid for the structural equation models. These assumptions included analysis of missing data, outliers, linearity, normal distribution (normality), lack of Multicollinearity, and constant variance

of error terms (homoscedasticity) (Collier, 2020). If these assumptions are met, it should be considered that the assumptions required for the structural equation modeling are also met.

The original sample of 930 cases was screened for completeness, resulting in the exclusion of six incomplete cases. Further analysis identified 11 cases (1.2%) with missing responses. Little's MCAR test indicated that the data were Missing Completely at Random (MCAR). Accordingly, the missing values were imputed using linear interpolation, and the remaining 924 cases were retained for further analysis (Tabachnick & Fidell, 2013). Screening for outliers revealed no univariate or multivariate outliers, and while skewness and kurtosis values fell within the acceptable range of -2 to $+2$, indicating a normal distribution (Hair et al., 2022) (see Table 10). The assumption of linearity was checked using a probability plot of standardized residuals, which visually confirmed a straight-line relationship between the independent and dependent variables (Tabachnick & Fidell, 2013). Finally, the assumption of the absence of multicollinearity was satisfied, as all Variance Inflation Factor (VIF) values were well below the threshold of 10 and all Tolerance values were above 0.2 (Tabachnick & Fidell, 2013) (see Table 9).

Table 9:

Multicollinearity Test Results

Variables	Collinearity Statistics		Conclusions
	Tolerance	VIF	
Social skill	0.468	2.139	No Multicollinearity
Social goal orientation	0.433	2.312	No Multicollinearity
Attitude towards help seeking	0.530	1.886	No Multicollinearity
Academic help-seeking behavior	0.462	2.164	No Multicollinearity

Notes: VIF = Variance Inflated Factor

4.2. Descriptive Statistics and Correlation Analysis of the Study Variables

Items for each of the constructs in the model were scored using a Likert scale, except for mathematics achievement. Students rated their level of agreement with each construct described in each item; thereby, the result indicated their intentions in each construct in the school situation and learning mathematics. For example, a high score on social skill (cooperation behavior scale) would indicate that the participant would have a high level of willingness to cooperate with their peers in a school situation. A low score on the cooperation behavior scale would indicate a low level of willingness to cooperate with their peers.

The mean value indicates the central tendency of the data or the most representative score within the dataset. As shown in Table 10, the descriptive results demonstrate that students generally exhibited moderate levels across the dimensions of social skills, social goal orientations, and academic help-seeking behaviors. Likewise, their perceptions of the benefits and costs of help-seeking were also moderate, suggesting a balanced attitude toward seeking help. Overall, these findings imply that students show an average tendency to engage socially and build close friendships, hold a moderately positive attitude toward help-seeking, and are moderately inclined to utilize instrumental help-seeking strategies when encountering academic difficulties.

The standard deviation is a statistical measure that indicates how many the values in a data set deviate from the mean. A small standard deviation shows that the data points are close to the mean (low variability); while a large standard deviation indicates that the values are spread out over a wider range (high variability). As shown in Table 10, most

standard deviation values reflect a moderate level of variability, suggesting that students' responses were fairly consistent. Table 10 presents a summary of descriptive statistics.

Table 10:

Descriptive Statistics Result

	N	Mini.	Max.	Mean	SD	Skewness	Kurtosis
MA	924	43.00	94.00	62.1429	14.62	.487	-1.260
AB	924	1.00	2.83	1.7946	0.504	.016	-.957
AHS	924	1.43	4.29	2.5332	0.726	.574	-1.065
BHS	924	1.00	5.00	2.8207	1.25	.014	-1.565
CB	924	1.00	3.00	1.8795	0.501	-.015	-.907
CHS	924	1.60	4.40	2.6043	0.666	.560	-.802
EB	924	1.00	2.71	1.7945	0.516	.048	-1.233
EHS	924	1.40	4.40	2.6223	0.736	.574	-.613
HIS	924	1.00	4.80	2.5446	1.027	.481	-1.191
SCB	924	1.00	2.86	1.7455	0.596	.303	-1.125
SIG	924	1.33	4.67	2.8869	0.848	.097	-.948
SSG	924	1.25	5.00	2.6034	0.889	.794	-.129

Note: - Mini = Minimum, Max = Maximum, SD = Standard Deviation, N = 924

Relationship among Study Variables

Pearson correlation analysis was conducted to examine the relationships between the research variables. The correlation analysis was conducted among the subscale scores and the total score; correlations of latent means were calculated between subscales and scale scores (total score) separately. Table 11 provides the bivariate correlations between the constructs' total scores included in the model. As seen in Table 11, social skill (SS) was positively and significantly correlated with mathematics achievement (MA) ($r = .665$, $p < 0.01$), attitude towards help seeking (ATHS) ($r = .525$, $p < 0.01$), and academic help-seeking behavior (AHSB) ($r = .578$, $p < 0.01$). On the other hand, social goal orientation (SGO) was positively and significantly correlated with mathematics achievement ($r =$

.705, $p < 0.01$), attitude towards help-seeking ($r = .548$, $p < 0.01$), and academic help-seeking behavior ($r = .619$, $p < 0.01$).

Table 11:

Correlations of the variables among constructs' total score

	Variable	1	2	3	4	5
1	MA	1				
2	SS	.665**	1			
3	SGO	.705**	.700**	1		
4	ATHS	.761**	.525**	.548**	1	
5	AHSB	.801**	.578**	.619**	.653**	1

** $p < 0.01$ (2-tailed)

Moreover as seen in Table 12 below, regarding dimensions of constructs the research confirmed that Mathematics Achievement (MA) was positively and significantly correlated with Cooperation Behavior ($r = .482$, $p < 0.01$), Assertion Behavior ($r = .469$, $p < 0.01$), Empathy Behavior ($r = .557$, $p < 0.01$), and Self-Control Behavior ($r = .549$, $p < 0.01$). Similarly, Instrumental Help Seeking (IHS) was positively and significantly correlated with Cooperation Behavior ($r = .497$, $p < 0.01$), Assertion Behavior ($r = .406$, $p < 0.01$), Empathy Behavior ($r = .518$, $p < 0.01$), and Self-Control Behavior ($r = .562$, $p < 0.01$). Moreover, Benefit of Help Seeking (BHS) was also positively correlated with Cooperation Behavior ($r = .529$, $p < 0.01$), Assertion Behavior ($r = .466$, $p < 0.01$), Empathy Behavior ($r = .578$, $p < 0.01$), and Self-Control Behavior ($r = .641$, $p < 0.01$).

In contrast, Cost of Help Seeking (CHS) was negatively correlated with cooperation behavior ($r = -.135$, $p < 0.01$), assertion behavior ($r = -.155$, $p < 0.01$), empathy behavior ($r = -.106$, $p < 0.01$), and self-control behavior ($r = -.225$, $p < 0.01$). Similarly, Executive Help Seeking (EHS) and Avoidance of Help Seeking (AHS) are

negatively correlated with cooperation behavior ($r = -.233, p < 0.01$; $r = -.051, p > 0.05$), assertion behavior ($r = -.173, p < 0.01$; $r = -.162, p < 0.01$), empathy behavior ($r = -.156, p < 0.01$; $r = -.176, p < 0.01$), and self-control behavior ($r = -.096, p < 0.01$; $r = -.248, p < 0.01$) respectively. Moreover, MA was also negatively correlated with cost of help seeking ($r = -.554, p < 0.01$), executive help seeking ($r = -.259, p < 0.01$), and avoidance of help seeking ($r = -.469, p < 0.01$). These significant correlations between dimensions of students' social skills indicated their positive or negative relation for those students with preferences for help-seeking behavior, attitude towards help-seeking, and mathematics achievement (see Table 12).

Moreover, regarding dimensions of social goal orientation (SGO): social intimacy goal was positively correlated with instrumental help seeking ($r = .708, p < 0.01$), benefit of help seeking ($r = .685, p < 0.01$) and mathematics achievement ($r = .720, p < .01$); again, negatively related with avoidance of help seeking ($r = -.257, p < 0.01$), executive help seeking ($r = -.252, p < 0.01$), and cost of help seeking ($r = -.217, p < 0.01$). Whereas, social status goal was positively correlated with executive help seeking ($r = .152, p < 0.01$), avoidance of help seeking ($r = .289, p < 0.01$), and cost of help seeking ($r = .363, p < 0.01$); again, negatively related with instrumental help seeking ($r = -.513, p < 0.01$), benefit of help seeking ($r = -.510, p < 0.01$) and mathematics achievement ($r = -.542, p < .01$) (see Table 12). These significant correlations between dimensions of students' social goal orientation indicated their positive or negative relation for those students with preferences for help-seeking behavior, attitude towards help-seeking, and mathematics achievement.

Finally, correlation analysis indicated that a number of variables had significant inverse relationships. In this regard, the two opposite social goal styles (intimacy and status goal) were negatively related ($r = -.670$, $p < .001$). Similarly, the two opposite styles of attitude towards help seeking (benefit and cost of help seeking) were negatively related ($r = -.640$, $p < .001$). Moreover, cost of help seeking and avoidance help seeking ($r = .578$, $p < .01$), cost of help seeking and instrumental help seeking ($r = -.465$, $p < .01$), benefit of help-seeking and instrumental help seeking ($r = .795$, $p < .01$), cost of help seeking and executive of help seeking ($r = -.081$, $p < .01$), and benefit of help seeking and avoidance of help seeking ($r = -.435$, $p < .01$) were significantly related. These significant correlations between dimensions of attitude towards help seeking and academic help-seeking behavior indicated there positive or negative association between students' attitude towards help-seeking with preferences for seeking help behavior. For example: - high levels of cost of help seeking at odds with a preference for avoidance help seeking, and high levels of benefit of help seeking at odds with a preference for instrumental help seeking or vice versa (see Table 12).

Table 12:*Correlations of the variables among dimensions of variables (subscale scores)*

		1	2	3	4	5	6	7	8	9	10	11	12
1	MA	1											
2	AB	.469**	1										
3	AHS	-.492**	-.162**	1									
4	BHS	.810**	.466**	-.435**	1								
5	CB	..482**	..385**	-.051	.529**	1							
6	CHS	-.554**	-.155**	.578**	-.640**	-.135**	1						
7	EB	.557**	.403**	-.176**	.578**	.503**	-.106**	1					
8	EHS	-.259**	-.173**	-.500**	-.153**	-.233**	-.081**	-.156**	1				
9	IHS	.866**	.406**	-.549**	.795**	.497**	-.465**	.518**	-.247**	1			
10	SCB	.549**	..411**	-.248**	.641**	.618**	-.225**	.493**	-.096**	.562**	1		
11	SIG	.720**	-.520**	-.257**	.685**	.616**	-.217**	.633**	-.252**	.708**	.635**	1	
12	SSG	-.542**	-.309**	.289**	-.510**	-.345**	.363**	-.358**	.152**	-.513**	-.377**	-.670**	1

*Note: Correlations corresponding to small, medium, and large effect sizes are .10, .24, and .37, respectively (Cohen,1988). ** $p < 0.01$ (2-tailed).*

4.3. Tests of the Hypothesized Structural Model

After successfully analyzing the measurement model, which includes the establishment of constructs and indicator reliability and validity, in the next step, a structural model was assessed to measure relationships among the latent variables and to test the hypotheses proposed model (see Figure 3). The structural equation model was examined holistically for mediation to determine the predictive relationship of social skill and social goal orientation with mathematics achievement.

PLS-SEM structural model is reviewed and evaluated using a systematic process. Evaluating a structural model in Partial Least Squares Structural Equation Modeling (PLS-SEM) involves assessing the relationships between latent variables (constructs) after the measurement model has been validated. For the structural model, the most important evaluation metrics are R^2 (explained variance), f^2 (effect size), and Q^2 (predictive relevance) (Hair et al., 2022). These values provide insights into the quality of the PLS path model estimations. Moreover, Benitez et al. (2020) explain that SRMR (Standardized Root Mean Square Residual), Normed Fit Index (NFI), and Chi-Square/degree of freedom (χ^2/df) are used in order to show model fit.

Analysis of Effect Size (f^2)

Effect size (f^2) is a statistical concept that measures the strength of the relationship between two variables. According to Hair et al. (2022) guidelines, $f^2 \geq 0.02$, $f^2 \geq 0.15$, and $f^2 \geq 0.35$ represent small, medium, and large effect sizes, respectively. The analysis revealed that **AHSB** $\rightarrow$ **MA** ($f^2 = 0.414$) had a large effect size, suggesting a substantial influence on the variance of mathematics achievement (**MA**). In contrast, other paths in the model had a small to medium contribution to the variances of

endogenous latent variables in the model. The f^2 values suggest that the constructs significantly contribute to explaining the variance in the endogenous variables (see Table 13).

Table 13:

Evaluation Result of Effect Size (f^2)

Relationship	f-square f^2
Academic Help Seeking behavior (AHSB) → Mathematics Achievement (MA)	0.414
Attitude towards Help Seeking (ATHS) → Academic Help Seeking behavior (AHSB)	0.317
Attitude towards Help Seeking (ATHS) → Mathematics Achievement (MA)	0.228
Social Goal Orientation (SGO) → Academic Help Seeking behavior (AHSB)	0.086
Social Goal Orientation (SGO) → Attitude towards Help Seeking (ATHS)	0.109
Social Goal Orientation (SGO) → Mathematics Achievement (MA)	0.053
Social skill (SS) → Academic Help Seeking behavior (AHSB)	0.026
Social skill (SS) → Attitude towards Help Seeking (ATHS)	0.097
Social skill (SS) → Mathematics Achievement (MA)	0.027

Coefficient of determination (R^2) and Predictive Relevance (Q^2)

Coefficient of determination (R^2) values of 0.75, 0.50, or 0.25 for the endogenous construct can be described as substantial, moderate, and weak (Hair et al., 2022). In contrast, Predictive Relevance (Q^2) is an indicator of the model's out-of-sample predictive power or predictive relevance. When a PLS path model exhibits predictive relevance, it accurately predicts data not used in the model estimation. In the structural

model, the resulting Q^2 values larger than 0 indicate that the exogenous constructs have predictive relevance for the endogenous construct under consideration (Hair et al., 2022).

As shown in Table 14, the model demonstrates high explanatory power for the endogenous constructs, with R^2 values of 0.801 and 0.587 indicating substantial variance explained, and 0.401 reflecting moderate explanatory strength. These results suggest that the model adequately captures the variance in key outcomes (endogenous construct). In addition, all Q^2 values are greater than zero, confirming the model's predictive relevance. This indicates that the model is not only explanatory but also capable of accurately predicting data points in cross-validation scenarios. Thus, the model has external predictive relevance, which indicates the model predicts the endogenous constructs better than chance.

Table 14:

Coefficient of determination (R^2) and Predictive Relevance (Q^2)

Construct	R-square (R^2)	Predictive Relevance (Q^2)
Academic Help Seeking behavior (AHSB)	0.587	0.382
Attitude towards Help Seeking (ATHS)	0.401	0.232
Mathematics Achievement (MA)	0.801	0.468

Measurement Invariance of Composite Models

The MICOM (Measurement Invariance of Composite Models) procedure is the dedicated method for assessing measurement invariance when using Partial Least Squares Structural Equation Modeling (PLS-SEM) in Smart-PLS (Henseler et al., 2016). The MICOM procedure was conducted to test measurement invariance across male and female groups. Configural invariance (Step 1) was confirmed by specifying identical

models for both genders (Henseler et al., 2016). Compositional invariance (Step 2) was established, as all permutation p-values for the original correlations exceeded 0.05, indicating that constructs were similarly formed across groups. Finally, equality of means and variances (Step 3) was also confirmed, with p-values above 0.05 for all constructs (see Table 15) (Hair et al., 2022). Since all three steps were satisfied, full measurement invariance was established, confirming that males and females interpret and measure the latent variables equivalently.

Table 15:

Measurement Invariance of Composite Models Results

Construct	Compositional invariance p value	Mean difference p	Variance difference p	Invariance Decision
AHSB	0.817	0.880	0.856	Full
ATHS	0.932	0.687	0.801	Full
MA	0.008	0.915	0.574	Full
SGO	0.510	0.913	0.691	Full
SS	0.811	0.958	0.855	Full

Note: SS = Social skill, SGO = Social goal orientation, ATHS = Attitude towards help seeking, AHSB = Academic help seeking behavior.

Model Fit Index Structural Model (PLS-SEM)

Evaluate the structural model; also include assessment model fits of the data in a way that's both theoretically meaningful and statistically appropriate. Smart PLS provides SRMR (Standardized Root Mean Square Residual), Normed Fit Index (NFI), and Chi-Square/degree of freedom (χ^2/df) are used in order to show the model fit of the model. Accordingly, the $\chi^2/df < 5$, $NFI > 0.90$ & $SRMR < 0.08$, demonstrating an acceptable model fit (Collier, 2020). As shown in Table 11, χ^2/df and SRMR value are

below the recommended threshold, and NFI value exceeds the threshold, indicating that the model fits the data well (see Table 16).

Table 16:

Model Fit Indices Result of Structural Model

Model Fit Indices	Recommended cut-off value	Saturated model	Estimated model
SRMR	SRMR < 0.08	0.028	0.068
χ^2/df	$\chi^2/df < 5$	2.667	2.732
NFI	NFI > 0.90	0.919	0.923

Altogether, the structural model meets all necessary evaluation criteria: it explains a significant amount of variance (R^2), has strong predictive relevance (Q^2), demonstrates meaningful effect sizes (f^2), and shows a good fit with the data (NFI, SRMR, χ^2/df). These results collectively confirm that a well-fitting model with important indicators, and provide that the structural model is not only theoretically sound but also statistically robust and predictive. Thus, these findings validate the structural model as both reliable and appropriate for further analysis and interpretation.

4. 4. Direct Effect Analysis

After successfully analyzing the structural model, the importance of the path coefficients is examined using the bias-corrected and accelerated bootstrap method with Smart PLS-4. The standardized path coefficients were examined using Caemmerer and Keith (2019) evaluation criteria. As an approximate guide, Caemmerer and Keith (2019) recommend that $\beta > 0.05$ is considered small, $\beta > 0.10$ moderate, and $\beta > 0.25$ large. The direct effect analysis was basically based on three research questions, which evaluated the role of predictor and mediator variables on the criterion variable and the role of

predictor variables on mediator variables. Thus, the analysis was based on the following research questions:

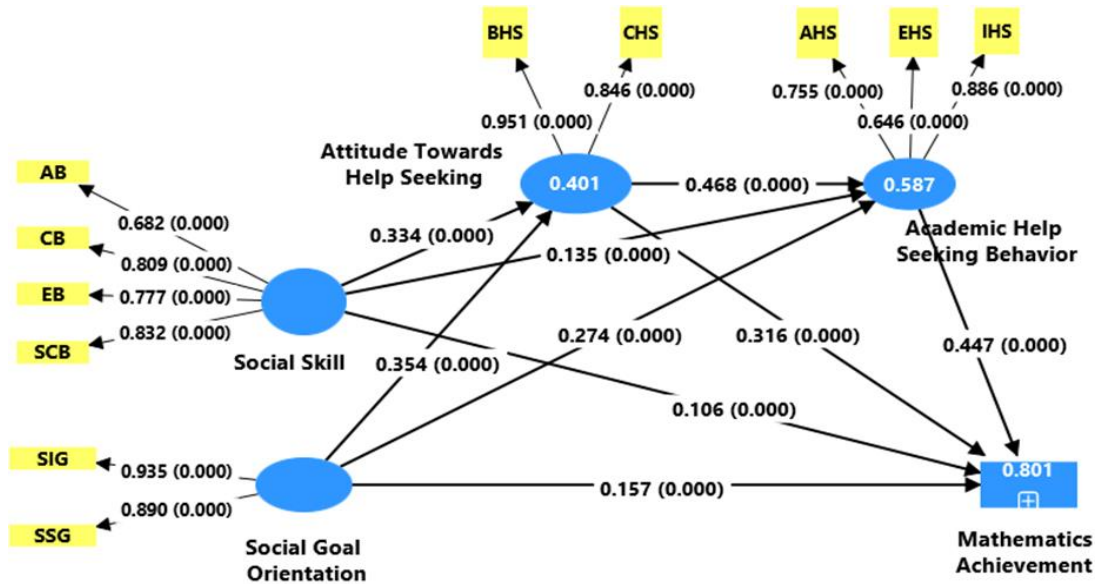


Figure 8: Results of the hypothesis testing using PLS-SEM

1. The role of students' social skills, social goal orientation, attitude towards help-seeking, and academic help-seeking behavior on their Mathematics achievement.

The first research question was addressed by regressing students' social skills, social goal orientation, attitude towards help seeking, and academic help-seeking behavior on their mathematics achievement. The structural equation modeling path model showed that mathematics achievement was directly predicted by social skill ($\beta = 0.106$, $p < 0.001$, 95%CIs [0.063, 0.149]), which excludes 0, and social goal orientation ($\beta = 0.157$, $p < 0.001$, 95%CIs [0.117, 0.195]), which excludes 0. Similarly, mathematics achievement was also directly predicted by attitude towards help-seeking ($\beta = 0.316$, $p < 0.001$, 95%CIs [0.276, 0.357]), which excludes 0, and academic help-seeking behavior ($\beta = 0.447$, $p < 0.001$, 95%CIs [0.400, 0.491]), which excludes 0 (see Table 17).

However, students' academic help-seeking behavior demonstrated stronger effects on mathematics achievement compared to the effects of social skill, social goal orientation, and attitude towards help-seeking behavior.

Regarding the role dimensions of social skills, social goal orientation, attitude towards help-seeking, and academic help-seeking behavior on mathematics achievement, the study confirmed the following details. Cooperation and empathy behaviors exerted a significant positive direct effect on mathematics achievement ($\beta = 0.095$, $p < 0.001$; $\beta=0.104$, $p < 0.001$); whereas assertion and self-control behaviors had a non-significant effect ($\beta = 0.018$, $p > 0.05$; $\beta=0.005$, $p > 0.05$) (see Table 18).

Moreover, social intimacy goal exerted a significant positive direct effect on Mathematics achievement ($\beta=0.182$, $p < 0.001$); whereas social status goal had a non-significant effect on mathematics achievement ($\beta=-0.014$, $p > 0.05$). On the other hand, the benefits of help seeking exerted a significant positive direct effect on Mathematics achievement ($\beta=0.083$, $p < 0.05$); whereas the costs of help seeking had a negative and significant effect on students' mathematics achievement ($\beta=-0.198$, $p < 0.001$). Finally, instrumental help seeking exerted a significant positive direct effect on Mathematics achievement ($\beta=0.407$, $p < 0.001$); whereas expedient and avoidance of help seeking had a negative and significant influence on students' mathematics achievement ($\beta=-0.160$, $p < 0.001$; $\beta=-0.129$, $p < 0.001$) (see Table 18).

2. The role of students' social skills, social goal orientation, and attitude towards help-seeking on their academic help-seeking behavior

The second research question was addressed by regressing students' social skills, social goal orientation, and attitude towards help-seeking on academic help-seeking

behavior. The SEM path model confirmed that academic help seeking behavior was directly predicted by attitude towards help seeking ($\beta = 0.468$, $p < 0.001$, 95%CIs [0.409, 0.521]), which excludes 0 over and above the level of social skill ($\beta = 0.135$, $p < .01$, 95%CIs [0.075, 0.194]), which excludes 0 and social goal orientation ($\beta = 0.274$, $p < 0.001$, 95%CIs [0.211, 0.341]), which excludes 0 (see Table 17).

Furthermore, regarding the role of dimensions of social skills, social goal orientation, and attitude towards help-seeking on academic help-seeking behavior, the study confirmed the following details. Instrumental help seeking was directly and positively predicted by cooperation behaviors ($\beta=0.118$, $p < 0.001$) and self-control behavior ($\beta=0.221$, $p < 0.001$); whereas assertion and empathy had a non-significant effect on instrumental help seeking ($\beta=0.033$, $p > 0.05$; $\beta=0.012$, $p > 0.05$) (see Table 20).

On the contrary, avoidance and expedient help-seeking are negatively predicted by cooperation behaviors ($\beta=-0.185$, $p < 0.001$; $\beta=-0.173$, $p < 0.001$) and empathic behaviors ($\beta=-0.095$, $p < 0.01$; $\beta=-0.097$, $p < 0.01$). Moreover, self-control behaviors had a significant negative effect on avoidance of help-seeking ($\beta=-0.165$, $p < 0.001$). However, assertion behaviors had a non-significant effect on avoidance, expedient, and instrumental help seeking ($\beta= -0.013$, $p > 0.05$; $\beta= -0.052$, $p > 0.05$; $\beta= 0.033$, $p > 0.05$) (see Table 20).

On the other hand, the social intimacy goal exerted a significant positive direct effect on instrumental help-seeking behavior ($\beta=0.340$, $p < 0.001$), whereas it negatively predicted expedient and avoidance of help seeking ($\beta= -0.143$, $p < 0.05$; $\beta= -0.182$, $p < 0.001$). In contrast, social status goal exerted a significant positive direct effect on avoidance of help seeking ($\beta= 0.130$, $p < 0.001$); whereas it had a non-significant effect

on instrumental help seeking ($\beta = 0.002, p > 0.05$) and expedient help ($\beta = 0.051, p > 0.05$) (see Table 20).

Finally, the benefits of help seeking exerted a significant positive effect on instrumental help seeking ($\beta = 0.558, p < 0.001$) and expedient help ($\beta = 0.114, p < 0.05$); whereas it had a significant negative effect on avoidance of help seeking ($\beta = -0.293, p < 0.001$). In contrast, costs of help seeking exerted a significant positive effect on avoidance of help seeking ($\beta = 0.593, p < 0.001$); whereas it had a significant negative effect on instrumental help seeking ($\beta = -0.291, p < 0.001$), but it had a non-significant effect on expedient help seeking ($\beta = -0.041, p > 0.005$).

3. The Role of Students' Social Skill and Social Goal Orientation on Their Attitude towards Help-Seeking

The third research question was addressed by regressing students' social skills and social goal orientation on their attitude towards help-seeking behavior. The structural equation modeling path model revealed that students attitude towards help-seeking directly and significantly predicted by social goal orientation ($\beta = 0.354, p < 0.001$, 95%CIs [0.2730.436]), which excludes 0 and above the level of social skill ($\beta = 0.334, p < .001$, 95%CIs [0.258, 0.405]), which excludes 0 (see Table 17).

Moreover, concerning the role of dimensions of social skills and social goal orientation, on attitude towards help seeking, the study confirmed the following details. Accordingly, assertion and empathy behaviors have a positive and significant impact on the benefits of help seeking ($\beta = 0.102, p < 0.001$; $\beta = 0.193, p < 0.001$); whereas they had a non-significant effect on costs of help seeking ($\beta = -0.065, p > 0.05$; $\beta = 0.039, p > 0.05$). Cooperation behaviors had a non-significant effect on both benefits and costs of help-

seeking ($\beta=0.032$, $p > 0.05$; $\beta=0.022$, $p > 0.05$). Self-control behaviors exerted a significant direct positive effect on the benefits of help-seeking ($\beta=0.302$, $p < 0.001$); whereas it has a significant negative effect on the costs of help-seeking ($\beta=-0.185$, $p < 0.001$) (see Table 19).

Furthermore, the social intimacy goal exerted a significant direct positive effect on the benefits of help-seeking ($\beta=0.196$, $p < 0.001$), whereas it had a significant negative effect on the costs of help-seeking ($\beta=-0.169$, $p < 0.001$). In contrast, the social status goal has a significant negative effect on the benefits of help-seeking ($\beta=-0.154$, $p < 0.001$), whereas it has a significant positive direct effect on costs of help-seeking ($\beta=0.408$, $p < 0.001$) (see Table 19).

Table 17:

Results of the Proposed Direct Effect Summary

Relation	Path Coefficient	Confidence Interval		Effect Size f^2
		LB	UB	
SS $\rightarrow$ MA	0.106 ***	0.063	0.149	0.027
SGO $\rightarrow$ MA	0.157 ***	0.117	0.195	0.053
ATHS $\rightarrow$ MA	0.316 ***	0.276	0.357	0.228
AHSB $\rightarrow$ MA	0.447 ***	0.400	0.491	0.414
SS $\rightarrow$ AHSB	0.135 **	0.075	0.194	0.026
SGO $\rightarrow$ AHSB	0.274 ***	0.211	0.341	0.086
ATHS $\rightarrow$ AHSB	0.468 ***	0.409	0.521	0.317
SS $\rightarrow$ ATHS	0.334 ***	0.258	0.405	0.097
SGO $\rightarrow$ ATHS	0.354 ***	0.273	0.436	0.109

Note: LB = lower bound; UB = upper bound; SS = Social skill; SGO = Social goal orientation; ATHS=Attitude towards help seeking; AHSB = Academic help seeking behavior; MA = Mathematics achievement (***) $p < 0.001$)

Table 18:

Results of the proposed direct effect of dimensions of variables on Mathematics Achievement

Relation	Path Coefficient	Confidence Interval	
		LB	UB
AB → MA	0.018	-0.008	0.047
CB → MA	0.095***	0.029	0.094
EB → MA	0.104***	0.064	0.145
SCB → MA	0.005	-0.039	0.041
SIG → MA	0.182***	0.127	0.234
SSG → MA	-0.014	-0.046	0.032
AHS → MA	-0.129***	-0.192	-0.067
EHS → MA	-0.16***	-0.208	-0.116
IHS → MA	0.407***	0.33	0.482
BHS → MA	0.083*	0.016	0.151
CHS → MA	-0.198***	-0.243	-0.15

* $p < 0.05$, *** $p < 0.001$

Table 19:

Results of the Proposed Direct Effect of dimensions of variable on attitude towards help seeking

Relation	Path Coefficient	Confidence Interval		Test Results
		LB	UB	
AB → BHS	0.102***	0.049	0.153	Supported
AB → CHS	-0.065	-0.137	0.011	Not Supported
CB → BHS	0.032	-0.038	0.097	Not Supported
CB → CHS	0.022	-0.069	0.121	Not Supported
EB → BHS	0.193***	0.139	0.248	Supported
EB → CHS	0.039	-0.04	0.119	Not Supported
SCB → BHS	0.302***	0.247	0.358	Supported
SCB → CHS	-0.185***	-0.265	-0.102	Supported
SIG → BHS	0.196***	0.118	0.278	Supported
SIG → CHS	-0.169***	-0.213	-0.121	Supported
SSG → BHS	-0.154***	-0.198	-0.105	Supported
SSG → CHS	0.408***	0.33	0.481	Supported

Note: AB = Assertion behavior; CB = Cooperation behavior; ; EB = Empathy behavior; SCB = Self-control behavior SIG = Social intimacy goal; SSG = Social status goal; BHS =Benefit of help seeking; CHS = Cost of help Seeking (***) $p < 0.001$)

Table 20:

Results of the proposed direct effect of dimensions of variables on academic help-seeking behavior

Relation	Path Coefficient	Confidence Interval		Test Results
		LB	UB	
CB → AHS	-0.185***	-0.276	-0.089	Supported
CB → EHS	-0.173***	-0.264	-0.077	Supported
CB → IHS	0.118***	0.098	0.187	Supported
AB → AHS	-0.013	-0.068	0.043	Not Supported
AB → EHS	-0.052	-0.117	0.014	Not Supported
AB → IHS	0.033	-0.043	0.037	Not Supported
EB → AHS	-0.095**	-0.165	-0.026	Supported
EB → EHS	-0.097**	-0.173	-0.039	Supported
EB → IHS	0.012	-0.061	0.032	Not Supported
SCB → AHS	-0.165***	-0.241	-0.092	Supported
SCB → EHS	-0.006	-0.069	0.055	Not Supported
SCB → IHS	0.221***	0.135	0.304	Supported
SIG → AHS	-0.182***	-0.278	-0.073	Supported
SIG → EHS	-0.143*	-0.264	-0.021	Supported
SIG → IHS	0.340***	0.256	0.416	Supported
SSG → AHS	0.130***	0.123	0.293	Supported
SSG → EHS	0.051	-0.041	0.141	Not Supported
SSG → IHS	0.002	-0.048	0.05	Not Supported
BHS → AHS	-0.293***	-0.429	-0.146	Supported
BHS → EHS	0.114*	0.009	0.192	Supported
BHS → IHS	0.558***	0.481	0.64	Supported
CHS → AHS	0.593***	0.510	0.668	Supported
CHS → EHS	-0.041	-0.092	0.014	Not Supported
CHS → IHS	-0.291***	-0.402	-0.169	Supported

Notes: AB = Assertion behavior; CB = Cooperation behavior; SCB = Self-control behavior; EB = Empathy behavior; SIG = Social intimacy goal; SSG = Social status goal; BHS =Benefit of help seeking; CHS = Cost of help Seeking; IHS = Instrumental help seeking; EHS = Executive help seeking; AHS = Avoidance Help seeking (* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

4.5. Indirect Effect Analysis

4.5.1. Parallel Mediation Effects Analysis

The mediating model (Figure 3) included other paths that contributed to the parallel mediation effects of social skill and social goal orientation on students' mathematics achievement. It is through the two mediator variables, attitude towards help-seeking and academic help-seeking behavior, separately, that were separately based on the sixth and seventh research questions. To determine the mediating effect of both students' attitude towards help seeking and academic help seeking behavior, bootstrapping estimation procedures with Smart PLS-4 were utilized to calculate the statistical significance of the $a*b$ product term.

Mediating Effect of Academic Help-Seeking Behavior

The sixth research question of the study was: Does students' academic help-seeking behavior mediate the relation between students' social skills and social goal orientation with mathematics achievement?

The findings indicate that the indirect effect path ($SS \rightarrow AHSB \rightarrow MA$) is significant ($\beta = 0.060$, $p < 0.001$, 95% CI = [0.034, 0.087]), which excludes 0, indicating a significant mediating effect of AHSB. Similarly, the indirect effect path ($SGO \rightarrow AHSB \rightarrow MA$) is also significant ($\beta = 0.123$, $p < 0.001$, 95% CI = [0.093, 0.155]), which excludes 0, demonstrating that the mediating effect of AHSB was statistically significant. Moreover, with the inclusion of the mediator, the direct effects of both SS and SGO on MA remained significant. This result confirms that AHSB partially mediated the relationship between SS and SGO, and MA. The mediation summary is presented in Table 21.

Mediating Effect of Attitude towards Help-Seeking

The seventh research question of the study was: Do students' attitudes towards help-seeking mediate the relation between students' social skills and social goal orientation with mathematics achievement?

The findings indicate that the indirect effect path (SS $\rightarrow$ ATHS $\rightarrow$ MA) is significant ($\beta = 0.106$, $p < 0.001$, 95% CI = [0.079, 0.134]), which excludes 0, indicating a significant mediating effect of ATHS. Similarly, the indirect effect path (SGO $\rightarrow$ ATHS $\rightarrow$ MA) is also significant ($\beta = 0.112$, $p < 0.001$, 95% CI = [0.086, 0.141]), which excludes 0, demonstrating that the mediating effect of ATHS was statistically significant. Moreover, the results confirmed that students' ATHS partially mediates the relationship between both SS and SGO with their MA among primary schools, as both direct and indirect effects are significant. The mediation summary is presented in Table 21.

Table 21:

Parallel Mediation Effects Analysis Summary

Relationship	Direct Effect	Indirect Effect	Confidence Interval	
			LB	UB
SS $\rightarrow$ AHSB $\rightarrow$ MA	0.106 ***	0.060 ***	0.034	0.087
SS $\rightarrow$ ATHS $\rightarrow$ MA		0.106 ***	0.079	0.134
SGO $\rightarrow$ AHSB $\rightarrow$ MA	0.157 ***	0.123 ***	0.093	0.155
SGO $\rightarrow$ ATHS $\rightarrow$ MA		0.112 ***	0.086	0.141

*** $p < 0.001$

4.4.2. Sequential Mediating Effect Analysis

The Serial Mediating Effect of Attitude towards Help Seeking and Academic Help Seeking Behavior

The eighth research question of the study was: Do students' attitudes towards help-seeking and academic help-seeking behavior sequentially mediate the relation between students' social skills and social goal orientation with mathematics achievement?

As displayed in Fig. 3, the study also considered both attitude towards help seeking and academic help-seeking behavior simultaneously as mediators. The study assessed the sequential mediating role of attitude towards help seeking and academic help-seeking behavior on the relationship between social skill and social goal orientation with mathematics achievement. Smart PLS 4.0 software, specifically partial least squares structural equations modeling (PLS-SEM), was used as a technique to evaluate the proposed sequential mediation effect. The sequential mediation effect is considered significant if the 95% bias-corrected confidence interval (BCCI) does not include 0.

Table 22 presents the bootstrap results for the sequential mediation effect. The analysis of the sequential mediation effect reveals that the indirect effect path (SS $\rightarrow$ ATHS $\rightarrow$ AHSB $\rightarrow$ MA) of the sequential mediation effect is significant ($\beta = 0.070$, $p < 0.001$, 95%CIs [0.053, 0.090]). Similarly, the indirect effect path (SGO $\rightarrow$ ATHS $\rightarrow$ AHSB $\rightarrow$ MA) of the sequential mediation effect is also significant ($\beta = 0.074$, $p < 0.001$, 95%CIs [0.058, 0.094]). This suggests that ATHS and AHSB play a sequential co-mediating role in the relationship between both SS and SGO with MA. This indicated that students having better SS or SGO enhance ATHS, which in turn boosts the level of AHSB, resulting in better MA and played sequential mediating roles (see Table 22).

Table 22:*Sequential Mediation Effect Analysis Summary*

Relationship	Direct	Indirect	Confidence	
	Effect	Effect	Interval	
			LB	UB
SS –ATHS-AHSB – MA	0.106 ***	0.070 ***	0.053	0.090
SGO–ATHS-AHSB--MA	0.157 ***	0.074 ***	0.058	0.094

*** $p < 0.001$

CHAPTER FIVE

DISCUSSIONS

In this section, the results of the study are discussed in detail in reference to previous research findings. The discussions of the findings are presented in four parts according to the major research questions raised. The first part presented a discussion on correlational analysis among the variables of the study. In the second part of the discussion, independent contribution of students' social skill and social goal orientation as motivational orientation and dimensions of help seeking constructs (attitude towards help-seeking, academic help-seeking behavior) on mathematics achievement followed by discussion on role of social skill and social goal orientation on the mediator variables (attitude towards help-seeking, academic help-seeking behavior). In the third part, discussions on the parallel mediating role of both attitudes towards help-seeking and academic help-seeking behavior are presented separately. Finally, the fourth section presents a discussion on the sequential mediation role of attitude towards help-seeking and help-seeking behavior on the relationship between students' social skills and social goal orientation with mathematics achievement.

Accordingly, although the role of social skill and social goal orientation as motivational orientations, and dimensions of help-seeking constructs (attitude towards help seeking and academic help-seeking behavior) on academic achievement are to some extent studied independently, interaction among these constructs might play a complementary role in predicting students' academic achievement. Thus, to provide a better understanding of the relationship between social skill and social goal orientation as motivational orientations and dimensions of help-seeking constructs (attitude towards

help seeking and academic help-seeking behavior) in predicting mathematics achievement, the study examined the empirical validity of the proposed conceptualization among primary school Grade 8 students.

5.1. Relationship among Study Variables

The correlation analyses were based on (Cohen et al., 2007) suggestions for evaluating relationships among constructs; they recommended that when Pearson's r correlation was 0–0.20 (very weak), 0.20–0.40 (weak), 0.40–0.60 (moderate), 0.60–0.80 (strong), and 0.80–1.00 (very strong). Table 12 shows inter-correlation among constructs' total scores; the theoretical expected pattern of results was found among motivational constructs (social skill and social goal orientation) with attitude towards help seeking, academic help-seeking behaviors, and mathematics achievement. As seen in Table 12, moderate to high correlations between constructs' total scores were found, with coefficients ranging from .52 to .80, and all correlations were also significant at the .01 level.

The correlation results basically demonstrated that both social skill and social goal orientation had a significant positive correlation with academic help-seeking behavior, attitude towards help-seeking, and mathematics achievement (see Table 12). This corroborates the literature, which describes classroom peer climate social behaviors (social skill or social goal orientation) related to attitude towards help seeking (Newman, 2000), and decision of help seeking from their peers and academic achievement (Marchand & Skinner, 2007; Shim et al., 2013). Accordingly, the correlations among these variables provide evidence for the natural nature of variables.

More explicitly, the correlation between construct subscale scores or dimensions of constructs results established the following details. In this regard, the correlation results confirmed that dimensions of social skills are positively and significantly correlated with instrumental help-seeking, the benefit of help-seeking, and mathematics achievement. While, negatively correlated with avoidance, executive, and the cost of help-seeking. Regarding this, studies indicated that students who have excellent social skills easily adopt the student role, better participate in classroom activities, cooperate with peers, share and receive compliments, reduce reluctance to seek help, and have better academic achievement (Chowdhury & Halder, 2019; Ladd et al., 2006). Likewise, students' social skills aid them in recognizing and managing emotions, developing care and concern for others, establishing positive relationships, making responsible decisions, and handling challenging situations effectively (Cooper et al., 2014).

Another significant finding from the correlation analysis confirmed that the social intimacy goal was positively related to instrumental and benefit of help-seeking, and mathematics achievement; whereas it was negatively related to avoidance, executive, and costs of help-seeking (Kiefer & Shim, 2016). Conversely, the social status goal was positively related to executive, avoidance, and cost of help-seeking; whereas it was negatively related to instrumental and benefit of help-seeking, and mathematics achievement. In support of this view, what a student wants to achieve from a social relationship tends to affect the ways students interact with peers around academic tasks (Magelinskaitė-Legkauskienė et al., 2016), attitude towards help seeking (Roussel et al., 2011), and their academic achievement (Kiefer & Shim, 2016).

Finally, the correlation analysis verified that interrelationships among dimensions of help-seeking constructs: attitude towards help seeking and academic help-seeking behavior have been discussed in the literature (Roussel et al., 2011; Tanaka et al., 2002). The negative constructs were all positively related, including executive, avoidance, and cost of help seeking, whereas the positive constructs were also all positively related: instrumental and benefit of help seeking. Likewise, the negative constructs had an inverse relationship to mathematics achievement. However, this does not infer causation, but the relationships among constructs reveal a connection among them and with the criterion variable (mathematics achievement).

5.2. Direct Effect Analysis

The effect of students' social skills, social goal orientation, attitude towards help seeking, and academic help-seeking behavior on their mathematics achievement

The results of the study confirmed that the students' social skills significantly and positively influenced the mathematics achievement of primary school students, which is consistent with the findings of previous studies (Elliott et al., 2001; Gustavsen, 2017; Malecki & Elliot, 2002). These studies demonstrate that social skills have an important behavioral factor that influences students' academic achievement. They confirmed that social skills are a separate but important influence on academic achievement. In an apparent support of this view, Malecki and Elliot (2002) found a significant relationship between teaching ratings, social skills rating systems, and math achievement.

The result of the study supports the hypothesis that students' social skills are an important motivational factor, creating an encouraging learning environment that influences their academic achievement. Students who have positive interactions and

relationships with their peers are more academically engaged and have higher levels of academic achievement (Lane et al., 2004; Patrick et al., 2011). These studies specified that the quality of students' social relationships has motivational significance, creating contexts that make students feel like they are a valued part of the classroom, hence making students more likely to adopt positive learning behaviors that lead to academic achievement.

Regarding dimensions of social skills, cooperative and assertive behavior were positive predictors of students' mathematics achievement, whereas empathic and self-control behavior were not significant predictors, which contradicts existing studies. Researchers have documented meaningful and predictive relationships between students' social behaviors, social skills, and their long-term academic achievement (Gresham, 2016; Gustavsen, 2017). Behaviors such as cooperation, following rules, and getting along with others create efficient classrooms and allow students to benefit from academic instruction, which enhances academic achievement (DiPerna et al., 2005; Meier et al., 2006). It has been documented that students who have positive interactions and relationships with their peers are more academically engaged and have higher levels of academic achievement (Cooper et al., 2014).

Moreover, although the implications of social goals for academic achievement in school have received far less attention (Kiefer & Shim, 2016), the study confirmed that social goal orientation had a significant and positive influence on the mathematics achievement of primary school students. Consistent with this finding, existing research on social goals strongly suggests that students' social relationship goals are positively related to their achievement. These studies argue that social goals, in which students

strive in peer interactions, are important predictor variables of their academic achievement (Dowson & McInerney, 2001, 2003; Kiefer & Ryan, 2008).

This is an important finding, maintaining that students' social goal orientation provides an alternative motivational orientation toward academic achievement. Student reports indicated that social goals endorsed in their peer relationship related to their mathematics achievement. The existing literature suggests that students may have social reasons for trying to succeed academically (Dowson & McInerney, 2003). Social goals in which students strive in peer interactions might provide useful insights in order to understand students' motivation and academic achievement (Bhat, 2014; Guan et al., 2006). Thus, the sole use of achievement goals might oversimplify the complexity of student motivation and achievement (Kiefer & Shim, 2016).

Concerning varied social goals that students endorsed among their peer interaction, the research differentiated social intimacy and social status goals (Kiefer & Ryan, 2008). The result of the study proved that the social intimacy goal positively and significantly predicts mathematics achievement; whereas the social status goal was not a significant predictor, which contradicts existing studies. Findings from social goals research strongly suggest that students' social goals are associated with their effort, engagement, and school achievement (Kiefer & Shim, 2016). In view of that, intimacy goals are positively related to effort, engagement on-task, and GPA, but negatively related to disruptive behavior. In contrast, status goals are also negatively related to effort in the classroom and academic achievement (Kiefer & Ryan, 2008).

Another important issue that the research attempted to verify was the direct role of students' academic help-seeking behavior and attitude towards help-seeking on their

mathematics achievement. Consistent with the existing studies on academic help-seeking behavior, the study was no exception and confirmed that academic help-seeking behavior significantly and positively predicted students' mathematics achievement (Karabenick, 2004; Patrick et al., 2011; Shim et al., 2013). The studies attested that appropriate use of help is regarded as a self-regulated learning (SRL) strategy that contributed to students' learning and achievement (Fong et al., 2021).

The result supports the important role of academic help-seeking to avoid potential failure and increase likelihood of achievement (Martin-Arbo et al., 2021). In the academic context, students who seek help with coursework are better able to maintain involvement in difficult tasks, avoid the possibility of academic failure, and increase their chances of mastering the material (Patrick et al., 2011). Using help-seeking, students will be able to recognize their learning problems and tackle those problems by asking questions of others (Ryan et al., 2005; Schenke et al., 2015). The studies make clear that help seeking is an active strategy that serves as an aid to achieve academic success in the face of academic difficulty.

Regarding the role of different aspects of academic help seeking behavior on students' mathematics achievement, this study identified three types of academic help-seeking behaviors among peers: instrumental, expedient, and avoidance of help seeking (Shim et al., 2013). As expected, the study affirmed that instrumental help seeking has a positive and significant influence on mathematics achievement, whereas expedient help and avoidance of help seeking have a negative and significant influence on students' mathematics achievement. Consistent with this finding, engaging in instrumental help-seeking is conducive to learning, as it involves requests for help that would further

learning and promote academic achievement (Ryan et al., 2005; Shim et al., 2013). In contrast to instrumental help-seeking, expedient help-seeking is likely to undermine learning and achievement (Martin-Arbo et al., 2021). This type of help-seeking often involves requests for a peer to do the work or just give an answer without explanation or elaboration (Ryan et al., 2005). Avoidance of help seeking, the tendency to not ask for help when needed, is likely to hinder student learning (Ryan & Shin, 2011) and negatively influence academic achievement (Ryan et al., 2005).

Finally, while the existing studies provide less attention to the role of students' attitudes towards help-seeking on their academic achievement, the findings confirmed that students' attitudes towards help-seeking have a significant positive effect on their mathematics achievement among grade eighth students. Consistent with this finding, Pajares et al. (2004) showed that students' attitude towards help seeking plays an essential role in order to explain their level of engagement in classroom activities as well as academic achievement.

Moreover, concerning aspects of attitude towards help seeking, the research identified two forms of attitudes: benefits and costs of help seeking (Tanaka et al., 2002). Accordingly, the study attested that the benefits of help seeking exerted a significant positive direct effect on mathematics achievement, whereas the costs of help seeking negatively predicted mathematics achievement. Attitudes towards help-seeking play a pivotal role in students' willingness to collaborate with their peers (Tanaka et al., 2002). Students who perceive help seeing beneficial for learning adopt adaptive strategies that enhance their learning and achievement (Skaalvik & Skaalvik, 2005). On the contrary,

those who perceive it as a threat have lesser tendencies to engage in adaptive strategies (Karabenick, 2001; Skaalvik & Skaalvik, 2005).

The research evidence acknowledged that students' attitudes towards the costs or benefits of help seeking were directly related to their learning and achievement (Chowdhury & Halder, 2019). The research observed that students who reported higher levels of benefits of help seeking demonstrated better achievement in mathematics among primary schools of Grade 8 students. One possible reason is that students having a positive attitude towards help seeking make them feel good and devote more time to collaborating with their peers, which influences their academic achievement (Roussel et al., 2011).

The effect of students' social skills, social goal orientation, and attitude towards help-seeking on their academic help-seeking behavior

The other important issue in the structural equation modeling was to validate the role of social skill, social goal orientation, and attitude towards help-seeking on students' academic help-seeking behavior. Accordingly, existing studies recognized the importance of motivational orientation and attitude for students' decision to seek help from their peers (Fong et al., 2021). They argued that academic help-seeking behavior requires a specific motivational process and belief. Depending on students' motivation, help-seeking appears either in the form of adaptive or non-adaptive behaviors (Marchand & Skinner, 2007; Parker et al., 2019).

Regarding the role of social skills on academic help-seeking behavior, the results affirm that social skills significantly and positively predicted changes in help-seeking behavior among the primary school of Grade 8. In an apparent support of this finding,

Elliott et al. (2001) explain that within the classroom environment, social skills are a key component and allow students to engage in reciprocal positive interactions with their peers. If students need help with their schoolwork but do not seek it, then their lack of social interaction in the classroom. When mutual respect and caring are prevalent in the classroom, students may be less likely to take unfair advantage of their peers (Magelinskaitė-Legkauskienė et al., 2016).

The results supported the motivational and affective significance of social skills on students' academic help-seeking behavior. Social interactions in the classroom exert a powerful influence on student motivation, engagement, and learning. It determines their level of cooperation and help-seeking behavior to resolve academic difficulties when they need (Denham & Brown, 2010). A caring, respectful, and supportive peer climate is also likely to promote adaptive help seeking. Students who are better able to interact with others are more motivated and have more resources to benefit from the learning environment compared to students who struggle to cooperate with peers (Meece et al., 2006).

Specifically, in relation to the types of social skills, the results of the study found that cooperative and self-control behavior significantly and positively predicted instrumental help seeking; whereas cooperative and empathic behavior negatively predicted expedient and avoidance help seeking. Students who are able to effectively and appropriately use social skills are more likely to receive positive feedback and avoid undesirable responses from others (Denham & Brown, 2010). The little evidence that exists suggests that students who perceive themselves to be more socially competent are more likely to seek help and related to reduced reluctant to seek help (DiPerna, 2006).

This suggests that students with higher levels of social skills: cooperative, empathic, and assertive behavior, better engage in adaptive help-seeking behavior, cooperate with their peers, and persist on difficult tasks compared to students rating themselves lower in these areas (Cooper et al., 2014).

Moreover, the result of the SEM analysis confirms that students' social goal orientation positively and significantly predicts their academic help-seeking behavior. Consistently, previous evidence has shown that students' social goal orientation in their peer relationships in the classroom is related to their academic help-seeking behavior (Shim et al., 2013). It has been suggested that social goals, which students strive for in peer interaction, are one aspect of how peer influences and group dynamics impact students' willingness to ask for help in academic tasks (Kiefer & Shim, 2016; Ryan et al., 2005).

This finding maintained that students' social goals are motivating beliefs about the essential utility of peer interaction in the classroom. These beliefs are more specific than traits and have the "power to mold experience and action" in peer interactions, impacting their help-seeking behavior (Dowson & McInerney, 2003; Wentzel, 2000). The findings observed that social goal orientation explains additional variance in students' academic help-seeking behavior and suggested that social goal orientations are associated indicative of their help-seeking behaviors in the classroom (Marchand & Skinner, 2007). Given the social nature of help-seeking behavior, social goal orientations are more likely to clarify students' help-seeking behavior in the classroom (Kiefer & Shim, 2016).

Importantly, with respect to aspects of students' social goal orientation in their peers' interaction, consistent with existing studies, the study confirmed that social intimacy goal positively and significantly predicted instrumental help-seeking behavior; whereas, it negatively and significantly predicted avoidance help-seeking behavior. Conversely, social status goal positively and significantly predicted avoidance help seeking (Kiefer & Shim, 2016). The finding supports and extends prior research indicating that students who endorse intimacy goals are more likely to engage in adaptive help seeking behavior because they appreciate the opportunity to interact and are less concerned with potential loss of social status (Kiefer & Shim, 2016). Whereas, students who endorse social status goals are less likely to engage in adaptive help seeking and more likely to expedient and avoidance of help seeking (Ryan & Patrick, 2001; Shim et al., 2013).

Finally, while the literature had little evidence on the role of attitude towards help seeking on academic help seeking behavior, the study attested that attitude towards help seeking significantly and positively predicted academic help seeking behavior of primary school Grade 8 students. Accordingly, students' attitude towards help seeking is a major cognitive determinant of their behavioral intentions and academic help-seeking behavior as well as their level of engagement in classroom activities (Fong et al., 2023; Roussel et al., 2011; Tanaka et al., 2002).

Moreover, concerning the two aspects of students' attitude towards help seeking, in line with existing empirical findings, the study attested that the benefit of help seeking positively and significantly predicted instrumental help-seeking, whereas negatively with expedient and avoidance help seeking (Skaalvik & Skaalvik, 2005; Tanaka et al., 2002).

In contrast, the cost of help seeking positively and significantly predicted avoidance help-seeking (Skaalvik & Skaalvik, 2005). Research provided by Tanaka et al. (2002) suggests that attitude towards help-seeking guides students' help-seeking behavior. Specifically, the benefit of help seeking leads to the development of instrumental help-seeking behavior and recognition that help seeking was a useful strategy that can help them learn, whereas the cost of help seeking leads to avoidance of help seeking and is less likely to engage in instrumental help-seeking behavior (Roussel et al., 2011).

Likewise, the results of this study further highlighted that students' attitude towards help seeking is an important antecedent to behavioral intentions that influence their actual help-seeking behavior in the classroom (Roussel et al., 2011). The study showed that students having a positive attitude towards help-seeking are more likely to engage in help-seeking behavior in learning mathematics to solve their learning difficulties. Consistent with this, Chowdhury and Halder (2019), in their systematic review, explain that possessing a positive attitude towards help-seeking motivates students to opt for an adaptive style of help-seeking, and keeping this in mind, students should be told about the benefits of help-seeking. This review also emphasizes the need to encourage a positive attitude for the growth of a desired academic help-seeking behavior among peers.

Further, the research supports that perceived benefits of help seeking in the classroom guide students to adopt more positive approaches towards help seeking (Skaalvik & Skaalvik, 2005). Researchers have found that students are more prone to ask for academic help adaptively when they perceive academic help seeking as being associated with more benefits and fewer threats (Skaalvik & Skaalvik, 2005; Tanaka et

al., 2002). Accordingly, those students who perceive help-seeking benefit for learning adopt adaptive strategies of help seeking; whereas those who perceive it as a threat have lesser tendencies to engage in instrumental help seeking (Karabenick, 2001; Roussel et al., 2011). This is presumably because students having a positive attitude towards help seeking know the advantage of seeking help and are free to ask, thus creating opportunities to use peers in their environment as resources in problem solving (Chowdhury & Halder, 2019; Tanaka et al., 2002).

To sum up the most important findings so far, indicated that compared with the social skill ($\beta = 0.072$, $p < 0.01$) and social goal orientation ($\beta = 0.266$, $p < 0.001$), attitude towards help seeking had a greater influence on academic help seeking behavior ($\beta = 0.554$, $p < 0.001$). This may demonstrate that attitude towards help-seeking critical issue to understand students' academic help-seeking behavior in the classroom (Chowdhury & Halder, 2019). They argued that the degree to which attitudes towards help seeking predict behavior depends upon factors such as the level of correspondence across measures and the domain of behavior, which determines that attitude towards help seeking highly determine students' academic help-seeking behavior (Skaalvik & Skaalvik, 2005).

The effect of students' social skills and social goal orientation on their attitude towards help-seeking

Lastly, the predictive model examined the role of social skill and social goal orientation on students' attitude towards help behavior. Although the existing scant studies provide little evidence, the result of structural equation modeling proved that students' social skills and social goal orientation significantly and positively predicted

their attitude towards help seeking among primary schools (Chowdhury & Halder, 2019). Newman (2000) clarifies that peer relationships and interactions are critical issues in order to understand students' attitude towards help-seeking.

Specifically about aspects of social skill, the evidence of the study confirmed that assertion, empathy, and self-control behaviors significantly and positively predict benefits of help seeking; whereas only self-control has a significant negative impact on costs of help seeking. It is presumed that those social skills, such as cooperation with peers, initiating relationships, sharing and receiving compliments, enable students to promote a positive classroom environment and develop a positive attitude towards seeking help from their peers (Cooper et al., 2014). In view of that, the study found that students rating themselves higher on assertion, empathy, and self-control behaviors demonstrated higher levels of benefit of help-seeking.

Moreover, in relation to dimensions of social goals among peers, the results of the study provide for the positive predicted influence of the social intimacy goal on the benefit of help seeking. On the contrary, the social status goal is a positive predictor of the cost of help seeking and a negative benefit of help seeking. This suggests that students who focus on the social intimacy goal in peer relationships are more likely to be free in their relationships and might develop a positive attitude towards help seeking (Roussel et al., 2011). Conversely, students who focus on a social status goal in peer relationships are more likely to prefer to maintain their status in their relationship and might develop a negative attitude towards help seeking (Chowdhury & Halder, 2019).

The study added evidence to the argument that social skills and social goals had an impact on attitude towards help seeking at 0.05 levels in the context of primary school

education. The results of the study confirmed that the formation of social skills and social intimacy goals was effective in eliciting the desired attitude towards help-seeking in the classroom. The result indicated that students rating themselves higher on social skill and social intimacy goals develop a positive attitude towards help-seeking. In an academic context, social relationships constitute a salient role and affect the way they engage in school and collaboration as well as their attitude towards help-seeking from peers. Friendship was found to be positively related to attitude towards help-seeking behavior (Tanaka et al., 2002).

Importantly, this study remedies the lack of past research, examining the relationship between aspects of social skill and social goal orientation with attitude towards help-seeking. The study results acknowledge the motivational significance of social skills and social goal orientation (social intimacy goal), which provide an essential context for developing a positive attitude towards help seeking among Grade 8 students. Compliant with this view, Chowdhury and Halder (2019) explain that encouragement of intimate and healthy interpersonal relations in the classroom will also help in the creation of a positive attitude towards academic help-seeking because students reported that intimate relations and empathy motivate them in developing a positive attitude towards help seeking behavior and engage in efficient help seeking in an academic setting.

5.3. Indirect Effect Analysis

5.3.1. Parallel Meditational Effect

The Meditational Effect of Students' Academic Help-Seeking Behavior

The study sought to determine the extent to which social skills and social goal orientation indirectly predict mathematics achievement in the eighth grade, through

academic help-seeking behavior. As one of the few studies that suggested that social skills (Caemmerer & Keith, 2015; DiPerna et al., 2002) and social goal orientation (Kiefer & Shim, 2016; Patrick et al., 2011) indirectly influence academic achievement by allowing students to work more successfully with peers, ask questions, and attend to the classroom environment. The results verified that students' social skills and social goal orientation indirectly influence their mathematics achievement via academic help-seeking behavior.

Although existing studies don't clearly address how social skill (DiPerna et al., 2002) and social goal orientation (Patrick et al., 2011) function to enhance students' academic achievement, the results of this study confirm that academic help-seeking behavior significantly mediated the relationship between social skill and social goal orientation with mathematics achievement. These findings support previous work on social skill (Cooper et al., 2014; DiPerna et al., 2005; Meier et al., 2006) and social goal orientation (Kiefer & Ryan, 2008; Ryan & Patrick, 2001), and extend them by using mediational analysis. Accordingly, the study attested that students' social skills and social goals have the potential to influence their academic help-seeking behavior, which, in turn, fosters their mathematics achievement.

The model examined in this study assumed that academic help-seeking behavior is the mechanism through which social skills and social goal orientation affect students' mathematics achievement. The study confirmed that social skills and social goal orientation ameliorate later academic help-seeking behavior, which, in order to enhance students' mathematics achievement. In this view, Karabenick (2004) explains that the process of seeking help is inherently social in nature; help-seeking behavior may

therefore be influenced by the learning environment. The way students strive for in peer interactions will provide useful insights into adaptive vs. maladaptive help-seeking exchanges among peers (Marchand & Skinner, 2007).

The finding supports the motivational precursors of social skill (Karabenick & Dembo, 2011) and social goal orientation (Kiefer & Shim, 2016), which enhance students' academic help-seeking behavior. Consistent with this finding, previous studies explain that although academic help seeking is an adaptive learning strategy which directly related to students' learning and achievement, it requires specific motivation resources and competencies (Chowdhury & Halder, 2019; Marchand & Skinner, 2007). Particularly, students' social behaviors are important motivational resources for adaptive help-seeking behavior and encourage collaboration with their peers, which in turn, improve their learning and achievement (Newman, 2000; Ryan & Shim, 2012; Smalley & Hopkins, 2020).

The findings support the suggestion of social cognition theory on the causal relationship between social behavior and academic achievement. Bandura's social cognition theory recommended that students' achievement results from continuous interaction among behavior, the external environment, and cognitive factors (Bandura, 1986). For several decades, researchers have conducted studies on social cognitive learning theory emphasizes self-regulatory processes (Schunk & Zimmerman, 2007). In this view, academic help seeking is considered a behavioral self-regulation process enhancing learning and achievement. As a strategy of self-regulation, academic help-seeking behavior enables students to properly use their environment for the benefit of their learning and achievement; however, it needs motivational competence, which might

be perceived as incorporating the ideas of Bandura (Karabenick, 2003; Marchand & Skinner, 2007).

Moreover, consistent with social cognitive theory, the research observed a causal relation in which social behavior (social skills & social goal orientation) creates a foundation that encourages students' help-seeking behavior, and consequently enhances mathematics achievement. Social skills (Malecki & Elliot, 2002) and social goal orientation (Kiefer & Ryan, 2008) affect how students interact with their peers around an academic task and their academic achievement, which was also confirmed in this research. Social skill and social goal orientation provide useful insights into adaptive vs. maladaptive help-seeking exchanges among peers (Ryan & Shim, 2012; Shim et al., 2013). On the other hand, engaging in adaptive help-seeking is conducive to learning, which enhances students' academic achievement (Martin-Arbo et al., 2021; Schenke et al., 2015).

The Meditational Effect of Students' Attitude towards Help-Seeking

Although attitude towards help seeking has been studied thoroughly, it often does not address the mediating role and specific domain functions of attitude towards help-seeking (Skaalvik & Skaalvik, 2005). In the model, the mediating role of attitude towards help seeking was tested in the relationship between students' social skills and social goal orientation with mathematics achievement separately. The result of structural equation modeling verified that attitude towards help seeking exerted a partial mediating role on the relation between both social skill and social goal orientation with the mathematics achievement of primary school students.

Based on prior studies, which provide the initial suggestion that social skill (DiPerna et al., 2002) and social goal orientation (Ryan & Patrick, 2001) affect how students interact with peers and their attitude towards help seeking, which was confirmed in this research. The research expands and supplements this line of inquiry by examining the mediating role of attitude towards help seeking in the relationship between social skill and social goal with mathematics achievement. Accordingly, the model examined in this study observed that the motivational predecessor of social skill and social goal orientation in the causal order affects attitude towards help seeking, which consecutively enhances students' mathematics achievement.

The results demonstrated that attitude towards help-seeking functioned as a mediating role in the path from both social skill and social goal orientation to mathematics achievement. In the study, students with a higher level of social skill and social goal orientation (social intimacy goal orientation) were reported to have a positive attitude towards help seeking and were more likely to collaborate with their peers to boost their achievement in mathematics. Students' interactions with peer guides make up an important part in order to stimulate a positive attitude towards help seeking (Chowdhury & Halder, 2019; Newman, 2000) and the process by which they enhance their academic achievement. These indicated that differences in attitude towards help seeking prove cumulative, as students' social skills and social goal influence their attitude towards help seeking, which in turn influences mathematics achievement.

The finding supports Bandura's social cognitive theory (Zimmerman, 1989b) and validates that social skill and social goal orientation as crucial behavioral factors contribute to the improvement of attitude towards help seeking (cognitive factor) in

enhancing mathematics achievement among primary school Grade 8 students. Research provided by Newman (2000) suggests that those classroom peer climates are optimal for facilitating students' attitude towards help seeking. Social features of the classroom, such as positive peer interaction, will help students to develop collaboration and a positive attitude towards help-seeking. This implied that attitude towards help seeking enhanced the effect of social skill and social goal orientation on mathematics achievement.

5.3.2. Sequential Mediating Effect

Sequential Mediating Effect of Attitude towards Help-Seeking and Academic Help-Seeking

Finally, the study sought to answer the sequential mediating role of attitude towards help-seeking and academic help seeking behavior in the relationship between social skill and social goal orientation with students' mathematics achievement. Although attitude towards help-seeking and academic help-seeking behavior both separately mediated these relationships, it is unclear about the sequential mediating role of these variables. This study's most significant finding, which sets it apart from similar research conducted (Karabenick & Dembo, 2011; Kiefer & Shim, 2016; Parker et al., 2019), is the sequential mediating role of attitude towards help seeking and academic help seeking behavior in the indirect effect of social skill and social goal orientation on mathematics achievement of primary schools of Grade 8 students. The study confirmed that attitude towards help seeking and academic help-seeking behavior jointly mediated the impact of social skill and social goal orientation on mathematics achievement.

The result presented here aligns with Bandura's social cognitive theory explanation: behavior, cognition, and environment are interconnected and mutually

determined (Zimmerman, 1989b). In the social cognitive perspective, students' academic achievement results from continuous, reciprocal interactions among behavior, the external environment, and cognitive factors (Zimmerman, 1995). In line with this, the findings support that students' social behaviors (social skill and social goal orientation) allow them to develop positive attitudes towards help seeking (cognitive factor), which, in turn, encourages a preference for seeking help from their peers (environmental factor) and ultimately boosts learning and achievement. This implies that higher levels of social skill and social goals endorse stimulating positive attitudes towards help seeking and elicit adaptive help seeking behavior, which improves their mathematics achievement.

Besides, in an apparent support of this view, the research observed that the attribution that student's social skill and social goal are related with academic achievement when there is an optimum match between social behavior (social skill and social goal orientation) and indicators of attitude towards help seeking behavior (Newman, 2000) which can be meaningfully and significantly influence their decision to seek academic help from their peers (Chowdhury & Halder, 2019; Tanaka et al., 2002). Notably, academic help-seeking behavior is an adaptive and strategically beneficial way to solve academic difficulties in the classroom, which is most likely to contribute to their learning and academic achievement in many ways (Fong et al., 2021; Martin-Arbo et al., 2021; Schenke et al., 2015). Other than the abovementioned, social skills and social goal orientation also contribute to harmonious interactions among students, which enable them to improve their attitude towards help-seeking behavior (Spence et al., 2000), provoke academic help-seeking behavior (Shim et al., 2013), and ultimately, boost learning and achievement.

By evaluating the relationship between social skill and social goal orientation with attitude towards help seeking, academic help seeking behavior and mathematics achievement in a sequential mediation frame-work, this study extends previous studies and findings which separately examine the role of social skill (Gustavsen, 2017; Meier et al., 2006) and social goal orientation (Kiefer & Ryan, 2008; Ryan & Patrick, 2001) on students' academic achievement, the role of on students attitude towards help seeking on academic help seeking behavior (Roussel et al., 2011; Skaalvik & Skaalvik, 2005), and the role of academic help seeking behavior on academic achievement (Fong et al., 2021), part of the process whereby social skill and social goal orientation predicts mathematics achievement through attitude towards help seeking and academic help seeking behavior.

The sequential mediating effect of attitude towards help seeking and academic help seeking behavior indicated that these variables have a comprehensive role in explaining students' mathematics achievement. Students' social behaviors play a pivotal role in understanding their interaction and attitude towards help-seeking (Marchand & Skinner, 2007; Newman, 2000), which, in turn, influences academic help-seeking behavior (Chowdhury & Halder, 2019; Parker et al., 2019), ultimately determines learning and achievement (Schenke et al., 2015). Importantly, the study attested that attitude towards help-seeking and academic help-seeking behavior were more highly related in the sequential model. Attitude towards help seeking is a cognitive determinant of students' decision to seek help when encountering difficulties (Skaalvik & Skaalvik, 2005). Students with positive attitudes are more likely to perceive seeking help as a proactive and adaptive coping strategy and actively engage in help-seeking behavior, which leads to better academic achievement (Roussel et al., 2011).

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a summary of the major findings, conclusions and recommendations of the study. The first section of this chapter begins with a brief overview of the study, followed by a summary of the empirical findings vis-à-vis the research questions posed and the conclusions of the study. Finally, recommendations have been drawn in the last section.

6.1. SUMMARY

The purpose of this study was to examine the mediating role of dimensions of help seeking constructs (attitude towards help seeking and academic help seeking behavior) in explaining the relationship between students' motivational orientation (social skill and social goal orientation) with mathematics achievement among primary schools of Grade 8 students. To guide the study and achieve the objective, the following research questions were raised:

1. Are there a significant relationship between students' social skills (cooperation, assertion, empathy, & self-control behavior) with their attitudes towards help-seeking (cost of help seeking & benefit of help seeking), academic help-seeking behavior (instrumental help-seeking, executive help-seeking, & avoidance help-seeking) and mathematics achievement?
2. Are there a significant relationship between students' social-goal orientation (social intimacy goal & social status goal) with their attitudes towards help-seeking (cost of help seeking & benefit of help seeking), academic help-seeking behavior

(instrumental help-seeking, executive help-seeking, & avoidance help-seeking), and mathematics achievement?

3. Do students' social skills, social goal orientation, attitude towards help seeking, and academic help-seeking behavior have an independent contribution on mathematics achievement?
4. Do students' social skills, social goal orientation, and attitude towards help seeking have an independent contribution on academic help-seeking behavior?
5. Do students' social skills and social goal orientation have an independent contribution on attitude towards help seeking?
6. Do students' academic help-seeking behavior mediate the relation between students' social skills and social goal orientation with their mathematics achievement?
7. Do students' attitudes towards help-seeking mediate the relation between students' social skills and social goal orientation with their mathematics achievement?
8. Do students' attitudes towards help seeking and academic help-seeking behavior have a sequential mediating role in the relationship between students' social skills and social goal orientation with their mathematics achievement?

In an attempt to come up with answers for proposed research questions, the study exclusively focused on Grade 8 students registered at nine primary schools of the Dessie city administration registered for the 2023/24 academic year. Data for the study were drawn from 924 primary school students in the Dessie city administration, Ethiopia. In order to examine phenomena of interest objectively, the researcher adapted standardized questionnaires for each construct that allowed the researcher to carefully measure what was observed.

Data analysis was done using SPSS 27.0 and Smart PLS 4 with the bootstrap method. Specifically, covariance-based SEM (CB-SEM) was used for measurement model confirmatory factor analyses, and partial least squares structural equations modeling (PLS-SEM) was employed to evaluate the proposed model. PLS-SEM is a technique that enables to prediction of the behavior of the variables of the model proposed based on the theoretical review and understanding of a complex phenomenon that includes mediation relationships.

Accordingly, first, the confirmatory factor analysis (CFA) was used to evaluate the measurement models. Five goodness-of-fit indices were used to allow for comprehensive evaluations of tested models. These are the chi-square test /degree of freedom (χ^2/df), the comparative fit index (CFI), the root mean-square error of approximation (RMSEA), the standardized residual mean square root (SRMR), and the Tucker Lewis index (TLI). Secondly, the reliability and validity of each scale were tested by providing the values of Cronbach's alpha (α), Omega (Ω), composite reliability (CR), Heterotrait-monotrait Ratio Statistics (HTMT), and average variance extracted (AVE).

Later, the structural model was evaluated, and the result confirmed that the model meets all necessary evaluation criteria: strong explanatory power (R^2), predictive relevance (Q^2), significant effect sizes (f^2), and good model fit (NFI, SRMR, χ^2/df), which indicated an overall robust structure. These findings validate the structural model as both reliable and appropriate for further analysis and interpretation. Thirdly, a correlation analysis was conducted to identify the direction of relevance relationships among the variables. Finally, the proposed conceptual structural model was evaluated, including direct and indirect relationships among variables. Thus, closer examination of

the findings of this study revealed the following specific points based on the research questions posed.

1. The correlation analysis confirmed that dimensions of social skills are positively and significantly correlated with instrumental help seeking, benefit of help seeking, and mathematics achievement, while negatively correlated with avoidance, executive, and cost of help seeking.
2. In addition, the correlation analysis attested that the social intimacy goal was positively related to instrumental and benefit of help seeking and mathematics achievement, whereas it was negatively related to avoidance, executive, and costs of help seeking. Conversely, the social status goal was positively related to executive, avoidance, and cost of help seeking, whereas it was negatively related to instrumental, benefit of help seeking, and mathematics achievement.
3. The analysis of SEM confirmed that those students' social skills, social goal orientation, attitude towards help seeking, and academic help seeking behavior demonstrated a significant positive direct relationship with mathematics achievement. Specifically, the analysis provides that cooperation behaviors, empathy behaviors, social intimacy goal, benefits of help seeking, and instrumental help seeking exerted a significant positive effect, whereas costs of help seeking, expedient, and avoidance of help seeking had a significant negative effect on mathematics achievement.
4. The analysis of SEM verified that those students' social skills, social goal orientation, and attitude towards help seeking have significant positive direct effects on their academic help seeking behavior. Moreover, the analysis maintained that cooperation behaviors, self-control behavior, social intimacy goal, and benefits of help seeking

- positively predicted instrumental help seeking behavior, whereas they negatively predicted avoidance and expedient help seeking behavior. On the contrary, avoidance of help seeking was positively predicted by social status goal and the costs of help seeking.
5. The analysis of SEM confirmed that those students' social skills and social goal orientation have a significant positive direct effect on attitude towards help seeking. Additionally, the analysis showed that assertion behavior, empathy behavior, self-control behavior, and social intimacy goal exerted a significant positive direct effect on the benefits of help seeking, whereas self-control behavior had a significant negative effect on the costs of help seeking. On the contrary, the social status goal has a significant positive direct effect on the costs of help seeking and a significant negative effect on the benefits of help seeking.
 6. The analysis of SEM attested to the parallel mediation role of attitude towards help seeking and academic help seeking behavior on the relationship between social skill and social goal orientation with mathematics achievement.
 7. Finally, the analysis of SEM confirmed the sequential mediating role of attitude towards help seeking and academic help seeking behavior on the relationship between social skill and social goal orientation with mathematics achievement.

6.2. CONCLUSIONS

Although the role of motivational orientations (social skill and social goal orientation) and dimensions of help-seeking constructs (attitude towards help seeking and academic help-seeking behavior) on academic achievement are rarely studied in various manners, the relations among these variables in predicting academic achievement remain unclear.

This study has evaluated the empirical validity of hypothetical conceptualizations, which depicted that (1) social skill, social goal orientation, attitude towards help seeking and academic help seeking behavior are independent predictors of mathematics achievement, (2) social skill and social goal orientation predict attitude towards help seeking and academic help seeking behavior and (3) there is a parallel and sequential mediating role of attitude towards help seeking and academic help seeking behavior in the relationship between social skill and social goal orientation with mathematics achievement.

Based on the previous findings in academic literature about academic achievement, the research proposed and tested the hypothesis by collecting data from nine randomly selected primary schools in Dessie, Ethiopia. The study provides valuable insights into the direct and indirect influences of social skill, social goal orientation, attitude towards help seeking, and academic help seeking behavior on primary school students' mathematics achievement. Consistent with previous research, the findings confirm the significant and positive impact of these variables on students' academic achievement. Moreover, compared to other constructs in the model, the study revealed that academic help-seeking behavior had a greater influence on students' mathematics achievement.

Importantly, the study enriches the limited empirical literature by emphasizing the critical role of social motivational processes, particularly students' social skills and social goal orientation (with an emphasis on social intimacy goals) in shaping their attitudes towards help seeking and academic help seeking behaviors. These social orientations are not only pivotal in understanding students' academic help-seeking behavior but also in supporting their broader learning and achievement. These may also help teachers in

understanding the motivational dynamics in schools that influence students' learning and achievement.

The findings of the study further conclude that students with better social skills and an emphasis on building intimate peer relationships are more likely to develop positive attitudes toward help seeking, engage in instrumental help-seeking behaviors, and perform better in mathematics. Social skills and social intimacy goals were found to serve as key catalysts in promoting a supportive classroom environment, fostering positive attitudes toward help seeking, and encouraging instrumental help-seeking behavior among students.

As expected, the study confirmed that students' academic help-seeking behavior is strongly influenced by their attitudes toward help seeking. Consistent with prior empirical research, it was found that students who perceive help-seeking as a threat to their self-esteem tend to avoid seeking help and engage less in instrumental help-seeking. Conversely, students who recognize the benefits of help-seeking are more likely to seek assistance proactively and use effective help-seeking strategies. Thus, enhancing students' attitudes toward help seeking may foster a greater willingness to seek academic support from peers and promote more effective help-seeking behaviors.

Furthermore, the findings highlight the significant role of both students' attitudes toward help seeking and their academic help-seeking behaviors in enhancing their learning and achievement in mathematics. This suggests that attitude toward help seeking serves as a key cognitive determinant of behavioral intention, influencing students' collaboration and academic achievement. Additionally, academic help seeking functions as an important self-regulatory learning strategy that enables students to overcome

learning difficulties, promote mastery learning, and is highly correlated with students' learning and achievement.

More importantly, this study advances the existing research by analyzing the parallel and sequential mediating roles of attitude toward help seeking and academic help-seeking behavior in the relationship between social skills, social goal orientation, and mathematics achievement within the framework of Bandura's Social Cognitive Theory (Zimmerman, 1989). The findings demonstrate that attitude toward help seeking and academic help-seeking behavior are part of the mechanism through which social skills and social goal orientation influence students' academic performance in mathematics.

Accordingly, the findings of this research provide new insights into the existing literature on primary school students' mathematics achievement by identifying the sequential mediating effects of attitude toward help seeking and academic help seeking behavior. The study demonstrated that academic help seeking behavior is the immediate predictor of students' mathematics achievement among the relationships between these variables. In this regard, the results confirmed that both attitude toward help seeking and academic help seeking behavior play a co-mediating role in enhancing students' academic performance.

Taken together, this study makes three key contributions to the literature on the independent and joint effects of social skill, social goal orientation, attitude toward help seeking, and academic help-seeking behavior on academic achievement among primary school students during early adolescence. First, the study demonstrates the significant direct impact of social skill, social goal orientation, attitude toward help seeking, and

academic help-seeking behavior on students' mathematics achievement. Second, it highlights the importance of social skills and social goal orientation in shaping students' attitudes and behaviors related to help-seeking factors that are crucial for learning and achievement. Third, the study provides new insights into the mechanisms through which social skill and social goal orientation influence mathematics achievement, revealing a significant parallel and sequential mediating role of attitude toward help-seeking and academic help-seeking behavior.

6.3. RECOMMENDATIONS

In cognizance of the results of the study, discussions and conclusions were made. The following recommendations were forwarded to understand the mediating and complementary role of dimensions of help seeking constructs (attitude towards help seeking and academic help seeking behavior) in the relation between motivational orientations (social skill and social goal orientation) and mathematics achievement to boost mathematics achievement among primary schools of Grade 8 students:

- The motivational role of social skill and social goal orientation on students' learning and achievement enables educators to better understand motivational dynamics in schools that influence learning and achievement.
- Teachers should design and implement instructional activities that foster a supportive learning environment in which students feel encouraged to seek help from peers when facing academic challenges. Additionally, educators should carefully consider how their instructional approaches and feedback practices can actively promote and enhance students' academic help-seeking behavior.

- Teachers should strive to develop students' social skills and create intimate relationships among peers with the intention of improving a positive attitude towards help seeking and academic help seeking behavior.
- The findings of the study suggested that these constructs have complementary roles in predicting students' academic achievement. Accordingly, a better understanding of the relationship among these constructs might allow teachers to reform teaching practices that enhance learning and achievement.
- This study highlights the importance of addressing the affective dimension of learning, particularly the social motivational processes within the classroom. Teachers should recognize that fostering a positive peer climate through the development of students' social skills and social goal orientation (social intimacy goals) is not only a valuable educational objective in itself, but also a key factor in promoting positive attitudes toward help seeking and encouraging academic help-seeking behavior.
- Future research should further investigate the mediating role of attitude towards help seeking and academic help-seeking behavior to deepen the understanding of Social Cognitive Theory in educational contexts. Exploring these relationships can clarify how social and cognitive factors jointly contribute to students' learning and achievement.
- The mediational findings of this study underscore the need for further research to explore mediating variables and the underlying mechanisms that influence students' learning and academic achievement. Future studies are encouraged to

employ mediation analysis to gain a deeper understanding of how psychological, social, and behavioral factors interact to shape learning outcomes in school.

Generally, the results from such analyses inform both theory and practice. Theoretically, they provide information on the relative importance of a mediator, which further improves theorizing the mechanisms of influence. Moreover, the research supports and extends the core premise of Social Cognitive Theory (SCT), which posits that learning and achievement are influenced not only by cognitive abilities but also by social behaviors and dimensions of help-seeking behavior as mediating factors. Specifically, the study demonstrates that attitudes toward help-seeking and academic help-seeking behavior mediate the relationship between social skills or social goal orientation and mathematics achievement.

Practically, the results suggest the importance of comprehensive interventions for an optimal outcome. Therefore, assessing the mechanisms through which social skill and social goal orientation influence primary school students' academic achievement is important because a multitude of variables may intervene in the process, which, if not detected, would lead to erroneous conclusions regarding direct effects.

Limitations and Future Directions

Although the current study benefits the literature, this study had certain limitations, and these should be noted for future research. First, the study employed a cross-sectional design to examine the mediating role of academic help-seeking behavior and attitudes toward help seeking in the relationship between social skills, social goal orientation, and mathematics achievement. Future research should adopt a longitudinal design to better understand the long-term relationships among these constructs.

Second, the research focused only on Grade 8 students' mathematics achievement in primary schools; therefore, any generalizations to students at other grade levels should be made with caution. Furthermore, the participants were limited to students from schools in the Dessie City Administration, Ethiopia. Of course, these concerns are not unique to this study, as all empirical studies are conditional on when and where, and whom. Future studies could attempt to replicate and verify these findings using a more extensive survey.

Moreover, given the challenges of learning mathematics, complexity of motivation in school and the presence of strong peer interaction at early adolescence period, we hope future work will continue to advance understanding the role of social skills and social goal orientation on students' motivation and achievement, and the important contribution of attitude towards help seeking and academic help seeking behavior on students collaboration, learning and achievement. Importantly, how social skills and social goal orientation influence academic achievement among primary schools.

In conclusion, it is clear from both the literature review and the results of this study that the factors that contribute to students' mathematics achievement are very complex. Therefore, mathematics achievement continues to be an important area of research to support effective instructional processes that enhance students' mathematics achievement. Accordingly, future researchers interested in examining predictors of student academic achievement may find these constructs as an advantageous avenue in order to understand and enhance students' learning and mathematics achievement, especially among primary schools. Lastly, further research addressing factors that influence students' academic help-seeking behavior in primary school settings would

provide an important contribution to the research on their topic and the need for meditational research to better understand factors that influence students' academic achievement.

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APPENDICES

APPENDIX I: Questionnaires to Be Filled By Students

**BAHIR DAR UNIVERSITY
COLLEGE OF EDUCATION
SCHOOL OF EDUCATIONAL SCIENCES
DEPARTMENT OF PSYCHOLOGY**

➤ **Questionnaires to Be Filled By Students**

Dear Respondent

The main purpose of this questionnaire is to collect necessary data for my **PhD** dissertation study on the topic entitled “**The Meditating Role of Dimensions of Help Seeking Constructs in Explaining the Relation between Students’ Motivational Orientation and Mathematics Achievement**” and thereby to come up with some workable solutions to overcome the existing problems. To achieve this, you have been selected to participate in the study. The outcome of this study will highly depend upon your responsible, sincere and timely response. Therefore, you are kindly requested to fill the questionnaire honestly and with great responsibility as per the instruction to generate data required for the study. Your responses will be read only by the researcher and used only for academic purpose.

Thank you in advance for your cooperation!

Fasika Teshale

SECTION 1: GENERAL INFORMATION

1.1 Name of school _____

1.2 Gender: - Male ☐ Female ☐

1.3 Grade level: - 8 ☐

SECTION 2: Students Attitude towards Help-Seeking Questionnaire

DIRECTIONS: The following statements are adapted to assess your perception towards help seeking from your peers to resolve academic difficulties. Please read each of the items carefully and rate the alternative on a 5 -Point Likert type scale that you think expresses your own belief. The numbers indicate 1= not at all true of me, 2= not true of me, 3= somewhat true, 4= true of me and 5= very true of me.

There is no right or wrong responses to the statements. You should circle the responses that most accurately describe your personal beliefs on benefit and cost of help seeking.

No	Questioner Items					
Benefits of Help-Seeking						
2.1	I think that asking a classmate questions helps me learn math	1	2	3	4	5
2.2	I feel smart when I ask a question my classmates during math class	1	2	3	4	5
2.3	I think it is important for me asking question from classmate to resolve difficulties in math.	1	2	3	4	5
Costs of Help-Seeking						
2.4	I think the classmates might think I'm dumb when I ask a question.	1	2	3	4	5
2.5	I think the classmates will get angry with me when I ask a question	1	2	3	4	5
2.6	I feel scared about asking questions.	1	2	3	4	5
2.7	I feel shy about asking questions.	1	2	3	4	5
2.8	I feel like it is just too much of a bother to ask questions.	1	2	3	4	5

SECTION 3: Students Help-Seeking Behaviors Questionnaire

DIRECTIONS: The following statements are adapted to assess your attempts to obtain assistance from your peers to resolve their academic difficulties. Please read each of the items carefully and rate the alternative on a 5 - point Likert type scale that you think expresses your behavior. The numbers indicate 1= not at all true, 2= not true, 3= somewhat true, 4= true and 5= very true.

There is no right or wrong responses to the statements. You should circle the responses that most accurately describe how true or false each statement is for you.

No	Questioner Items					
	Instrumental Help Seeking					
3.1	When I ask a student for help with my mathematics work, I don't want that student to give away the whole answer.	1	2	3	4	5
3.2	When I ask a student for help understanding the material in this class, I prefer that the student help me understand the general ideas rather than simply tell me the answer.	1	2	3	4	5
3.3	When I ask a student for help in mathematics class, I want to be helped to complete the work myself rather than have the work done for me.	1	2	3	4	5
3.4	When I ask a student for help in mathematics class, I prefer to be given hints or clues rather than the answer.	1	2	3	4	5
3.5	When I ask a student for help with something I don't understand, I ask the student to explain it to me rather than just give me the answer.	1	2	3	4	5
	Executive Help Seeking	1	2	3	4	5
3.6	When I ask a student for help on something I don't understand, I prefer that student to just give me the answer rather than to explain it.	1	2	3	4	5
3.7	When I ask a student for help with mathematics work, I prefer	1	2	3	4	5

	that the student do the work for me rather than explain to me how to do it.					
3.8	When I ask another student for help on something I don't understand, I ask that student to do it for me.	1	2	3	4	5
3.9	When I ask a student for help in mathematics class, I want the work done for me rather than be helped to complete the work myself.	1	2	3	4	5
3.10	When I ask a student for help with my work, I prefer to be given the answer rather than an explanation of how to do the work myself.	1	2	3	4	5
Avoidance of Help Seeking		1	2	3	4	5
3.11	I don't ask for help in math's class even when the work is too hard to solve on my own.	1	2	3	4	5
3.12	If I need help to do a math's problem, I prefer to skip it rather than to ask for help.	1	2	3	4	5
3.14	If I didn't understand something in math's class, I would guess rather than ask someone for help.	1	2	3	4	5
3.15	I would rather do worse on an assignment I couldn't finish than ask for help in math's class.	1	2	3	4	5
3.17	I would put down any answer rather than ask for help in math's class.	1	2	3	4	5
3.18	I don't ask questions in math's class even if I don't understand the lesson.	1	2	3	4	5
3.19	If work in math's class is too hard, I don't do it rather than ask for help.	1	2	3	4	5

SECTION 4: Students Social Goals Orientation Questionnaire

DIRECTIONS: The following statements are adapted to assess your goal in social interaction in the classroom. Please read each of the items carefully and rate the alternative on a 5 -point Likert type scale that you think expresses your own belief or behavior. The numbers indicate **1**= not at all true, **2**= not true, **3**= somewhat true, **4**= true and **5** = very true.

There is no right or wrong responses to the statements. You should circle the responses that most accurately describe your personal actions.

No	Questioner Items					
	Social Intimacy goal					
4.1	I would like to get to know my school friends really well.	1	2	3	4	5
4.2	I would like to keep promises I have made to my friends.	1	2	3	4	5
4.3	I would like to have a friend I can confide in.	1	2	3	4	5
4.4	It is important to me to have one or two really close friends.	1	2	3	4	5
4.5	It is important to me that I am accepted by other students	1	2	3	4	5
4.6	I would like to get along with most other students.	1	2	3	4	5
	Social Status Goal					
4.7	I want to be included in popular peer groups at school	1	2	3	4	5
4.8	I want to be dominant among my peers group	1	2	3	4	5
4.9	I want to be well-known among my peers	1	2	3	4	5
4.10	I want to be socially central among my peers	1	2	3	4	5

SECTION 5: Students Social Skill Questionnaire

DIRECTIONS: The following statements are adapted to assess your social skills. Please read each of the items carefully and rate the alternative on a 3 -point Likert type scale that you think expresses your own behavior. The numbers indicate 1 = never, 2 = sometimes, 3 =always.

There is no right or wrong responses to the statements. You should circle the responses that most accurately describe your personal actions.

No	Questioner Items			
	Students Cooperation Behaviors			
5.1	I finish classroom work on time	1	2	3
5.2	I keep my desk clean and neat	1	2	3
5.3	I ask before using other people's things	1	2	3
5.4	I listen to adults when they are talking to me	1	2	3
5.5	I avoid doing things with others that may get me in trouble with adults	1	2	3
5.6	I ask friends to do favors for me	1	2	3
	Students Assertion Behaviors			
5.7	I start talks with class members	1	2	3
5.8	I start conversations with opposite-sex friends without feeling uneasy or nervous	1	2	3
5.9	I ask friends for help with my problems	1	2	3
5.10	I give compliments to members of the opposite sex	1	2	3
5.11	I talk things over with classmates when there is a problem or an argument	1	2	3
5.12	I asks someone I like for a date	1	2	3
	Students Self-control Behaviors			
5.13	I control my temper when my friends are angry with me	1	2	3
5.14	I compromise with my friends when we have disagreements	1	2	3
5.15	I disagree with my friends without fighting or arguing	1	2	3

5.16	I take criticism from my friends without getting angry	1	2	3
5.17	I end fights with my friends calmly	1	2	3
5.18	I make friends easily	1	2	3
5.19	I follow the teacher's directions	1	2	3
5.20	I do nice things for my parents like helping with household chores without being asked	1	2	3
	Students Empathy Behaviors			
5.21	I say nice things to others when they have done something well.	1	2	3
5.22	I try to understand how my friends feel when they are angry, upset or sad.	1	2	3
5.23	I feel sorry for others when bad things happen to them.	1	2	3
5.24	I listen to my friends when they talk about problems they are having.	1	2	3
5.25	I let friends know I like them by telling or showing them.	1	2	3
5.26	I stand up for my friends when they are unfairly criticized.	1	2	3
5.27	I tell other people when they have done something well	1	2	3

ተቀጽላ - II: በተማሪዎች የሚሞላ መጠይቅ

ባህር ዳር ዩኒቨርሲቲ

ትምህርት ኮሌጅ

የሳይኮሎጂ ትምህርት ክፍል

በተማሪዎች የሚሞላ መጠይቅ

ውድ ምላሽ ሰጪዎች (ተማሪዎች)

የዚህ መጠይቅ ዋና ዓላማ በተማሪዎች በተነሳሽነት አቅጣጫ (Motivational Orientations) እና በሂሳብ ውጤት (Mathematics Achievement) መካከል ያለውን ግንኙነት የሚያጠናክር የተማሪዎች እገዛ የመጠየቅ አመለካከት (Attitude towards Help-Seeking) ና የእገዛ መጠየቅ ባህሪ (Help Seeking Behavior) ላይ ለሚያጠና የፒኤችዲ (PhD) መመረቂያ ጥናቱ አስፈላጊ የሆኑ መረጃዎችን መሰብሰብ ና ያሉትን ችግሮች ለማስወገድና መፍትሄዎችን ለመጠቀም ነው፡፡

በመሆኑም ይህንን ለማሳካት በጥናቱ ላይ ለመሳተፍ ተመርጠዋል። የዚህ ጥናት ውጤት በእርስዎ ኃላፊነት፣ ቅንነት እና ወቅታዊ ምላሽ ላይ በእጅጉ የተመሰረተ ነው። ስለሆነም መጠይቁን በቅንነት እና በታላቅ ሃላፊነት እንድትሞሉ በትህትና እየጠየቀሁ ምላሾቹ በተመራማሪው ብቻ የሚነበቡ እና ለአካዳሚክ ዓላማ ብቻ ጥቅም ላይ የሚውል ይሆናል።

ስለትብብራችሁ አስቀድሜ አመሰግናለሁ !!!

ፋሲካ ተሻለ

ክፍል 1: አጠቃላይ መረጃ

1.1 የትምህርት ቤቱ ስም _____

1.2 ጾታ: - ወንድ ☐ ሴት ☐

1.3 የክፍል ደረጃ: - 8 ☐

1.4 ሴክሽን:- ☐

ክፍል 2: ተማሪዎች እገዛ ስለመጠየቅ ያላቸውን አመለካከት (Attitude towards Help-Seeking) የሚያሳይ መጠይቅ

መመሪያ: የሚከተሉት ጥያቄዎች ያልገባችሁን ለመረዳት የክፍል ንደኛህን/ሽን) እገዛ ስለመጠየቅ ያለህን/ሽን/ አመለካከት ለመገምገም ቀርበዋል። ስለሆነም እያንዳንዱን ጥያቄ በጥንቃቄ እያነበባችሁ ከተሰጡት ባለ 5 - ነጥብ ላይክርት ስኬል አማራጮች ራሳችሁን ገምግማችሁ የእኔን እምነት ወይም አመለካከት ይገልጻል የምትሉትን በማክበብ መልሱ። የተሰጡት ቁጥሮች የሚያመለክቱት 1= በፍፁም እውነት አይደለም፣ 2 = እውነት አይደለም፣ 3 = በመጠኑ እውነት ነው፣ 4 = እውነት ነው እና 5 = በጣም እውነት ነው።

ከተሰጡት አማራጮች ውስጥ ትክክል ወይም ስህተት የሆነ ምላሽ ስለሌለዉ የእኔን አመለካከት በትክክል ይገልጻል የምትሉትን ምላሽ በማክበብ መልሱ።

.ቁ	መጠይቆች	አማራጮች				
		እገዛን የመጠየቅ ጥቅሞች (Benefits of Help-Seeking)				
2.1	የክፍል ዓደኛየን ጥያቄ መጠየቅ የሒሳብ ትምህርትን የበለጠ እንድንገነዘብ የሚረዳኝ ይመስለኛል።	1	2	3	4	5
2.2	የክፍል ዓደኛየን በሂሳብ ክፍለ ጊዜ ጥያቄ ስጠይቅ ብልህነት ይሰማኛል።	1	2	3	4	5
2.3	በሂሳብ ክፍለ ጊዜ ያልገባኝን ለመረዳት የክፍል ዓደኛየን ጥያቄ መጠየቅ አስፈላጊ ይመስለኛል።	1	2	3	4	5
.ቁ	መጠይቆች	አማራጮች				
		እገዛን የመጠየቅ ጉዳዮች (Costs of Help-Seeking)				
2.4	የክፍል ዓደኞቹን ጥያቄ ስጠይቅ ዓደኞቹ አይችሉም ብለው ሊያስቡ ይችላሉ።	1	2	3	4	5
2.5	የክፍል ዓደኞቹን ጥያቄ ስጠይቅ ዓደኞቹ ይናደዱብኛል ብዬ አስባለሁ።	1	2	3	4	5
2.6	የክፍል ዓደኞቹን ጥያቄ ለመጠየቅ ፍርሃት ይሰማኛል።	1	2	3	4	5
2.7	የክፍል ዓደኞቹን ጥያቄ ለመጠየቅ ዓይናፋርነት ይሰማኛል።	1	2	3	4	5
2.8	የክፍል ዓደኞቹን ጥያቄ መጠየቅ በጣም የሚያስጨንቅ ሆኖ ይሰማኛል።	1	2	3	4	5

ክፍል 3: የተማሪዎችን እገዛ መጠየቅ ባህል (Help Seeking Behavior) የሚያሳይ መጠይቅ

መመሪያ: የሚከተሉት ጥያቄዎች ያልገባችሁን ለመረዳት ከዓደኞቻችሁ እገዛ ለማግኘት የምታደርጉትን ሙከራ ለመገምገም ቀርበዋል። ስለሆነም እያንዳንዱን ጥያቄ በጥንቃቄ እያነበባችሁ ከተሰጡት ባለ 5 - ነጥብ ላይክርት ስኬል አማራጮች ራሳችሁን ገምግማችሁ የእኔን ባህል ይገልጻል የምትሉትን በማክበብ መልሱ። የተሰጡት ቁጥሮች የሚያመለክቱት 1= በፍጹም እውነት አይደለም፤ 2 = እውነት አይደለም፤ 3 = በመጠኑ እውነት፤ 4 = እውነት ነው እና 5 = በጣም እውነት ነው።

ከተሰጡት አማራጮች ውስጥ ትክክል ወይም ስህተት የሆነ ምላሽ ስለሌለው የእኔን

ባህሪ በትክክል ይገልጻል የምትሉትን ምላሽ በማክበብ መልሱ።

ተ.ቁ	መጠይቆች	አማራጮች				
	ተመጣጣኝ እገዛ መጠየቅን የሚያሳይ መጠይቅ (Instrumental Help Seeking)					
3.1	የክፍል ጓደኛየን ሂሳብ ስሰራ ያልገባኝን እንዲረኝ ስጠይቅ ሙሉውን መልስ እንዲሰጥ አልፈልግም።	1	2	3	4	5
3.2	የክፍል ጓደኛየን የሂሳብ ትምህርትን ለመረዳት እንዲረዳኝ ስጠይቅ፣ መልሱን በቀላሉ ከመንገር ይልቅ አጠቃላይ ሀሳቦቼን እንድረዳ እንዲረዳኝ እመርጣለሁ።	1	2	3	4	5
3.3	የክፍል ጓደኛየን በሂሳብ ክፍለ ጊዜ እንዲረዳኝ ስጠይቅ፣ ስራውን ከሚሰራልኝ ይልቅ ስራውን እኔ እንድሰራው እንዲረዳኝ እፈልጋለሁ።	1	2	3	4	5
3.4	የክፍል ጓደኛየን በሂሳብ ክፍለ ጊዜ እገዛ ስጠይቅ፣ ከመልሱ ይልቅ ፍንጭ ቢሰጠኝ እመርጣለሁ።	1	2	3	4	5
3.5	የክፍል ጓደኛየን ባልተረዳሁት ነገር ላይ እንዲረዳኝ ስጠይቅ፣ መልሱን ብቻ ከሚነግረኝ እንዲያስረዳኝ እጠይቃለሁ።	1	2	3	4	5
	የበዛ እገዛ መጠየቅን የሚያሳይ መጠይቅ (Executive Help Seeking)	አማራጮች				
3.6	የክፍል ጓደኛየን ባልተረዳሁት ነገር ላይ እንዲረዳኝ ስጠይቅ፣ ከሚያብራራልኝ ይልቅ መልሱን ብቻ ቢነግረኝ እመርጣለሁ።	1	2	3	4	5
3.7	የክፍል ጓደኛየን በሂሳብ ስራ እንዲረዳኝ ስጠይቅ፣ እንዴት እንደምሰራው ከሚያብራራልኝ ይልቅ ስራውን ቢሰራልኝ እመርጣለሁ።	1	2	3	4	5
3.8	በማላውቀው ነገር ላይ ሌላ ተማሪ እንዲረዳኝ ስጠይቅ፣ ተማሪው እንዲሰራልኝ እጠይቃለሁ።	1	2	3	4	5

3.9	የክፍል ጓደኛዎን በሂሳብ ክፍል እንዲረዳኝ ስጠይቅ፣ ስራውን ራሴ ለማጠናቀቅ ከሚረዳኝ ይልቅ እንዲሰራልኝ እፈልጋለሁ።	1	2	3	4	5
3.10	የክፍል ጓደኛዎን በሂሳብ ስራዬ እንዲረዳኝ ስጠይቅ፣ ስራውን እንዴት እንደምሰራው ከማብራራት ይልቅ መልሱን እንዲሰጠኝ እመርጣለሁ።	1	2	3	4	5
ተ.ቁ	እገዛ አለመፈለግን የሚያሳይ መጠይቅ (Avoidance of Help Seeking)	አማራጮች				
3.11	የሂሳብ ትምህርትን በራሴ ለመስራት በጣም ቢከብደኝም እንኳን እገዛን አልጠይቅም።	1	2	3	4	5
3.12	የሂሳብ ተግባርን ለመስራት እገዛ ቢያስፈልገኝም እንኳን፣ እገዛ ከመጠየቅ ይልቅ ባልፈጠኝ እመርጣለሁ።	1	2	3	4	5
3.13	በሂሳብ ክፍል ጊዜ ያልገባኝ ነገር ቢኖር እንኳን፣ የሌላ ተማሪ እገዛ ከመጠየቅ ይልቅ በግምት መስራት እመርጣለሁ።	1	2	3	4	5
3.14	በሂሳብ ክፍል ጊዜ ለተሰጠኝ ተግባር የሌላ ተማሪን እገዛን ከመጠየቅ ይልቅ በራሴ ሰርቶ መጨረስ ባልችልና ዝቅተኛ ወጪት ባመጣ እመርጣለሁ።	1	2	3	4	5
3.15	በሂሳብ ክፍል ጊዜ የተሰጠኝን ተግባር ስሰራ እገዛ ከመጠየቅ ይልቅ መልስ ነገሩ ብዬ የማስበወን እጽፋለሁ።	1	2	3	4	5
3.16	በሂሳብ ክፍል ጊዜ የዕለቱ ትምህርት ባይገባኝም እንኳን ጥያቄዎችን አልጠይቅም።	1	2	3	4	5
3.17	በሂሳብ ክፍል ጊዜ ያለወጠ ተግባር ቢከብደኝም እንኳን፣ እርዳታ ከመጠየቅ ይልቅ አልሰራውም።	1	2	3	4	5

ክፍል 4፡ የተማሪዎች ማህበራዊ ግቦች አቅጣጫ (Social Goals Orientation) የሚያሳይ መጠይቅ

መመሪያ፡ የሚከተሉት ጥያቄዎች ከጓደኞቻችሁ ጋር በሚኖራችሁ ማህበራዊ ግንኙነት ያላችሁን ማህበራዊ ግብ አቅጣጫ (Social Goals Orientation) ለመገምገም ቀርበዋል። ስለሆነም እያንዳንዱን ጥያቄ በጥንቃቄ እያነበባችሁ ከተሰጡት ባለ 5 - ነጥብ ላይክርት ስኬል አማራጮች ራሳችሁን ገምግማችሁ የእኔን አላማ ይገልጻል የምትሉትን በማክበብ መልሱ። የተሰጡት ቁጥሮች የሚያመለክቱት 1= በፍጹም እውነት አይደለም፤ 2= እውነት አይደለም፤ 3 = በመጠኑ እውነት፤ 4 = እውነት ነው እና 5 = በጣም እውነት ነው።

ከተሰጡት አማራጮች ትክክል ወይም ስህተት የሆነ ምላሽ የለውም የእኔን አላማ በትክክል ይገልጻል የምትሉትን ምላሽ በማክበብ መልሱ።

	መጠይቆች	አማራጮች				
	ማህበራዊ መቀራረብን የመፈለግ ግብ (Social Intimacy goal)					
4.1	የትምህርት ቤት ጓደኞቼን በደንብ ማወቅ እፈልጋለሁ።	1	2	3	4	5
4.2	ለጓደኞቼ የገባሁትን ቃል መፈጸም እፈልጋለሁ።	1	2	3	4	5
4.3	በጣም የምቀርበው ጓደኛ እንዲኖረኝ እፈልጋለሁ።	1	2	3	4	5
4.4	አንድ ወይም ሁለት የቅርብ ጓደኞች እንዲኖሩኝ እፈልጋለሁ።	1	2	3	4	5
4.5	በሌሎች ተማሪዎች ዘንድ ተቀባይነት እዲኖረኝ እፈልጋለሁ።	1	2	3	4	5
4.6	ከሌሎች ተማሪዎች ጋር መስማማት እፈልጋለሁ።	1	2	3	4	5
	ማህበራዊ ትኩረት የማግኘት ግብ (Social Status Goal)					
4.7	በትምህርት ቤት ውስጥ ተዋቂ የሆኑ ጓደኞች እናዲኖሩ እፈልጋለሁ።	1	2	3	4	5

4.8	ከጓደኞቻቸው መካከል ተጽዕኖ ፈጣሪ መሆን እፈልጋለሁ፡፡	1	2	3	4	5
4.9	በጓደኞቻቸው ዘንድ በደንብ መታወቅ እፈልጋለሁ፡፡	1	2	3	4	5
4.10	በጓደኞቻቸው ዘንድ የማህበራዊ ግንኙነታችንን ማዕከል መሆን እፈልጋለሁ፡፡	1	2	3	4	5

ክፍል 5: የተማሪዎችን ማህበራዊ ክህሎት (Social Skill) የሚያሳይ መጠይቅ

የሚከተሉት ጥያቄዎች የተማሪዎችን ማህበራዊ ክህሎት (Social Skill) ለመገምገም ቀርበዋል። ስለሆነም እያንዳንዱን ጥያቄ በጥንቃቄ እያነበባችሁ ከተሰጡት ባለ 3 - ነጥብ ላይክርት ስኬል አማራጮች ራሳችሁን ገምግማችሁ የእኔን ክህሎት ይገልጻል የምትችሉትን በማክበብ መልሱ። የተሰጡት ቁጥሮች የሚያመለክቱት 1= በጭራሽ ፣ 2 = አንዳንድ ጊዜ ፣ እና 3 = ሁል ጊዜ ነው፡፡

ከተሰጡት አማራጮች ትክክል ወይም ስህተት የሆነ ምላሽ የለዉም የእኔን ክህሎት በትክክል ይገልጻል የምትችሉትን ምላሽ በማክበብ መልሱ።

ቁ	መጠይቆች	አማራጮች		
	የተማሪዎችን የመተባበር ባህሪያት የሚያሳይ መጠይቅ (Students Cooperation Behaviors)			
5.1	የክፍል ስራዬን በሰዓቱ አጠናቅቃለሁ፡፡	1	2	3
5.2	ጠረጴዛዬን በንጽህና እጠብቃለሁ፡፡	1	2	3
5.3	የጓደኞቼን ንብረት ከመጠቀሜ በፊት አስፈቅዳለሁ፡፡	1	2	3
5.4	ትልልቅ ሰዎች ሲያወሩኝ አዳምጣለሁ፡፡	1	2	3
5.5	ከአዋቂዎች ጋር አለመግባባት ውስጥ ሊያስገቡኝ የሚችሉ ነገሮችን ከጓደኞቼ ጋር ከማድረግ እቆጠባለሁ፡፡	1	2	3
5.6	ጓደኞቼ ውለታ እንዲያደርጉልኝ እጠይቃለሁ፡፡	1	2	3

	ተማሪዎች ሃሳባቸውን በአግባቡ የመግለጽ ባህሪያትን የሚያሳይ መጠይቅ (Students Assertion Behaviors)			
5.7	ከክፍል ዓደኞቹ ጋር ንግግር እጀምራለሁ፡፡	1	2	3
5.8	ተቃራኒ ጾታ ካላቸው ዓደኞቹ ጋር ምንም አይነት ጭንቀት ሳይሰማኝ ውይይቶችን እጀምራለሁ፡፡	1	2	3
5.9	ዓደኞቹን ለችግሮቹ እገዛ እንዲሰጡኝ እጠይቃለሁ፡፡	1	2	3
5.10	ተቃራኒ ጾታ ላላቸው ዓደኞቹ የሚያስፈልጋቸውን አግዛቸዋለሁ፡፡	1	2	3
5.11	በክፍል ዓደኞቹ ላይ ቅሬታ ሲኖረኝ እነግራቸዋለሁ፡፡	1	2	3
5.12	ዓደኞቹ ጋር አብሮ ለማሳለፍ ስፈልግ እጠይቃለሁ፡፡	1	2	3
	የተማሪዎች ራስን የመቆጣጠር ባህሪያት የሚያሳይ መጠይቅ (Students Self-control Behaviors)			
5.13	ዓደኞቹ ሲናደዱብኝ እራሴን እቆጣጠራለሁ፡፡	1	2	3
5.14	ከዓደኞቹ ጋር አለመግባባት ሲፈጠር በአግባቡ እፈታለሁ፡፡	1	2	3
5.15	የሃሳብ ልዩነቴን ሳልጣላ ወይም ሳልከራከር ለዓደኞቹ እገልጻለሁ፡፡	1	2	3
5.16	ዓደኞቹ አስተያየት ሲሰጡኝ ሳልናደድ እቀበላለሁ፡፡	1	2	3
5.17	ከዓደኞቹ ጋር የሚፈጠርን አለመግባባት በእርጋታ እፈታለሁ፡፡	1	2	3
5.18	በቀላሉ ዓደኛ እመስርታለሁ፡፡	1	2	3
5.20	የአስተማሪዎቼን መመሪያ አከብራለሁ፡፡	1	2	3
	ተማሪዎች ዓደኞቻቸውን በአግባቡ የመረዳት ባህሪያት የሚሳይ መጠይቅ (Students Empathy Behaviors)			
5.20	ዓደኞቹ መልካም ነገር ሲያደርጉ ጥሩ መልስ እመልሳለሁ፡፡	1	2	3
5.21	ዓደኞቹ ሲናደዱ ወይም ሲያዝኑ ምን እንደሚሰማቸው ለመረዳት እሞክራለሁ፡፡	1	2	3
5.22	ዓደኞቹ መጥፎ ነገሮች ሲደርስባቸው አዝናለሁ፡፡	1	2	3
5.23	ዓደኞቹ ስላጋጠማቸው ችግሮች ሲያወሩ አዳምጣቸዋለሁ፡፡	1	2	3
5.24	ዓደኞቹን እንደምወዳቸው በንግግር ወይም በተግባር	1	2	3

	አሳውቃቸዋለሁ።			
5.25	ጓደኞቼ አግባብ ባልሆነ መንገድ ሲነቀፉ ከእነሱ ጎን እቆማለሁ።	1	2	3
5.26	ጓደኞቼ ጥሩ ነገር ሲያደርጉ ጥሩ መስራታቸውን እነግራቸዋለሁ።	1	2	3

How Variables of the Study Are Code on SPSS

Latent Variable	Dimension	Code	Measurement Items
Attitude towards Help Seeking (ATHS)	Benefits of Help-Seeking	BHS	BHS1, BHS2, BHS3
	Costs of Help-Seeking	CHS	CHS1, CHS2, CHS3, CHS4, CHS5
Academic Help Seeking Behavior (AHSB)	Instrumental Help Seeking	IHS	IHS1, IHS2, IHS3, IHS4, IHS5
	Executive Help Seeking	EHS	EHS1, EHS2, EHS3, EHS4, EHS5
	Avoidance of Help Seeking	AHS	AHS1, AHS2, AHS3, AHS4, AHS5, AHS6, AHS7
Social Goal Orientation (SGO)	Social Intimacy goal	SIG	SIG1, SIG2, SIG3, SIG4, SIG5, SIG6
	Social Status Goal	SSG	SSG1, SSG2, SSG3, SSG4
Social Skill (SS)	Cooperation Behaviors	CB	CB1, CB2, CB3, CB4, CB5, CB6
	Assertion Behaviors	AB	AB1, AB2, AB3, AB4, AB5, AB6
	Self-control Behaviors	SCB	SCB1, SCB2, SCB3, SCB4, SCB5, SCB6, SCB7
	Empathy Behaviors	EB	EB1, EB2, EB3, EB4, EB5, EB6, EB7

APPENDIX III: Model Fit Summary of CFA (Smart PLS output)

Model fit indexes of Social skill (First – Order)

	Estimated model	Null model
Chi-square	759.527	12030.611
Number of model parameters	58.000	26.000
Number of observations	924.000	n/a
Degrees of freedom	293.000	325.000
P value	0.000	0.000
ChiSqr/df	2.592	37.017
RMSEA	0.042	0.197
RMSEA LOW 90% CI	0.038	0.194
RMSEA HIGH 90% CI	0.045	0.200
GFI	0.939	n/a
AGFI	0.926	n/a
PGFI	0.783	n/a
SRMR	0.025	n/a
NFI	0.937	n/a
TLI	0.956	n/a
CFI	0.960	n/a
AIC	875.527	n/a
BIC	1155.593	n/a

Model fit indexes of Social goal orientations (First – Order)

	Estimated model	Null model
Chi-square	79.388	6009.976
Number of model parameters	21.000	10.000
Number of observations	924.000	n/a
Degrees of freedom	34.000	45.000
P value	0.000	0.000
ChiSqr/df	2.335	133.555
RMSEA	0.038	0.379
RMSEA LOW 90% CI	0.027	0.371
RMSEA HIGH 90% CI	0.049	0.387
GFI	0.983	n/a
AGFI	0.973	n/a
PGFI	0.608	n/a
SRMR	0.016	n/a
NFI	0.987	n/a
TLI	0.990	n/a
CFI	0.992	n/a
AIC	121.388	n/a
BIC	222.791	n/a

Model fit indexes of Attitude towards help seeking (First – Order)

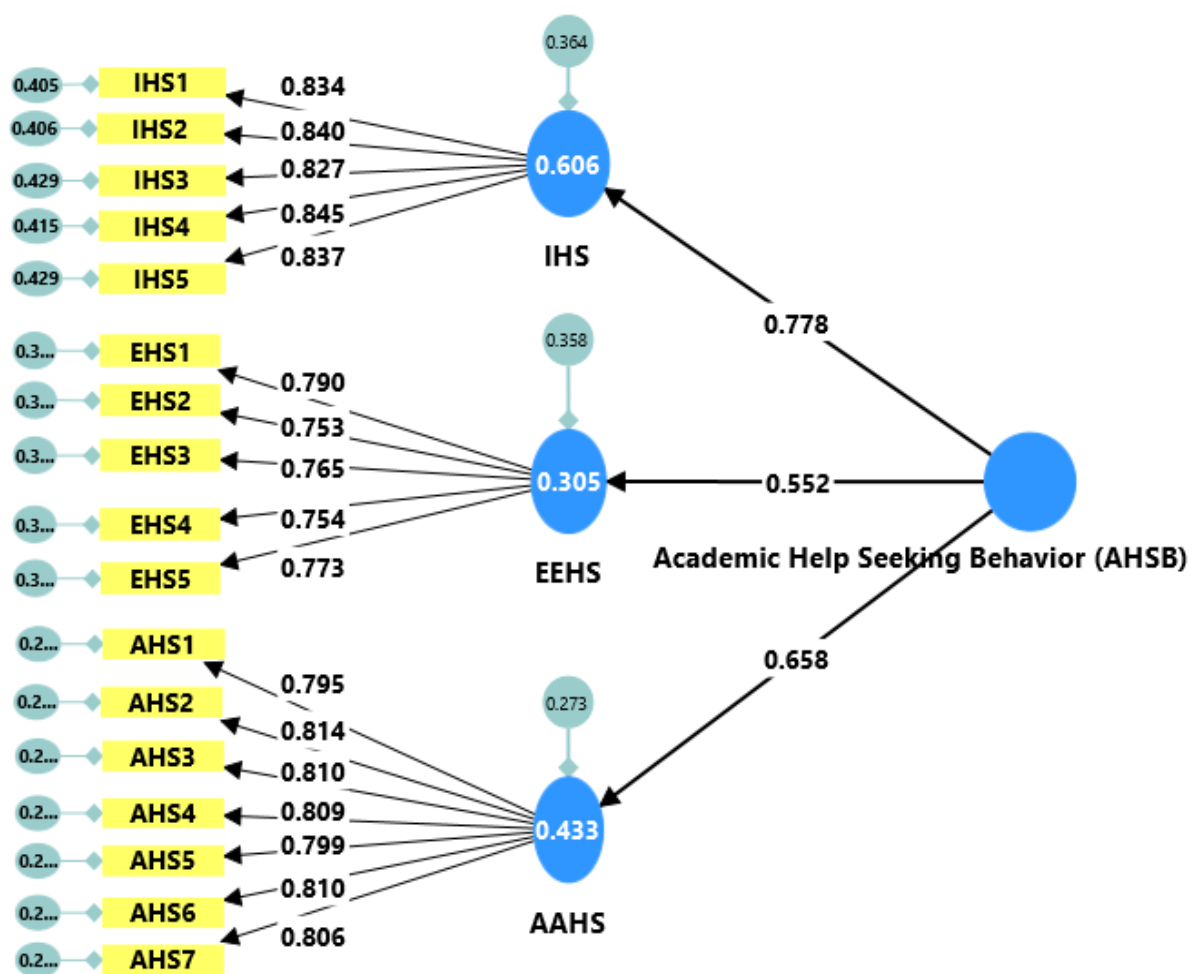
	Estimated model	Null model
Chi-square	74.969	3579.070
Number of model parameters	17.000	8.000
Number of observations	924.000	n/a
Degrees of freedom	19.000	28.000
P value	0.000	0.000
ChiSqr/df	3.946	127.824
RMSEA	0.056	0.370
RMSEA LOW 90% CI	0.043	0.360
RMSEA HIGH 90% CI	0.070	0.381
GFI	0.981	n/a
AGFI	0.963	n/a
PGFI	0.518	n/a
SRMR	0.024	n/a
NFI	0.979	n/a
TLI	0.977	n/a
CFI	0.984	n/a
AIC	108.969	n/a
BIC	191.057	n/a

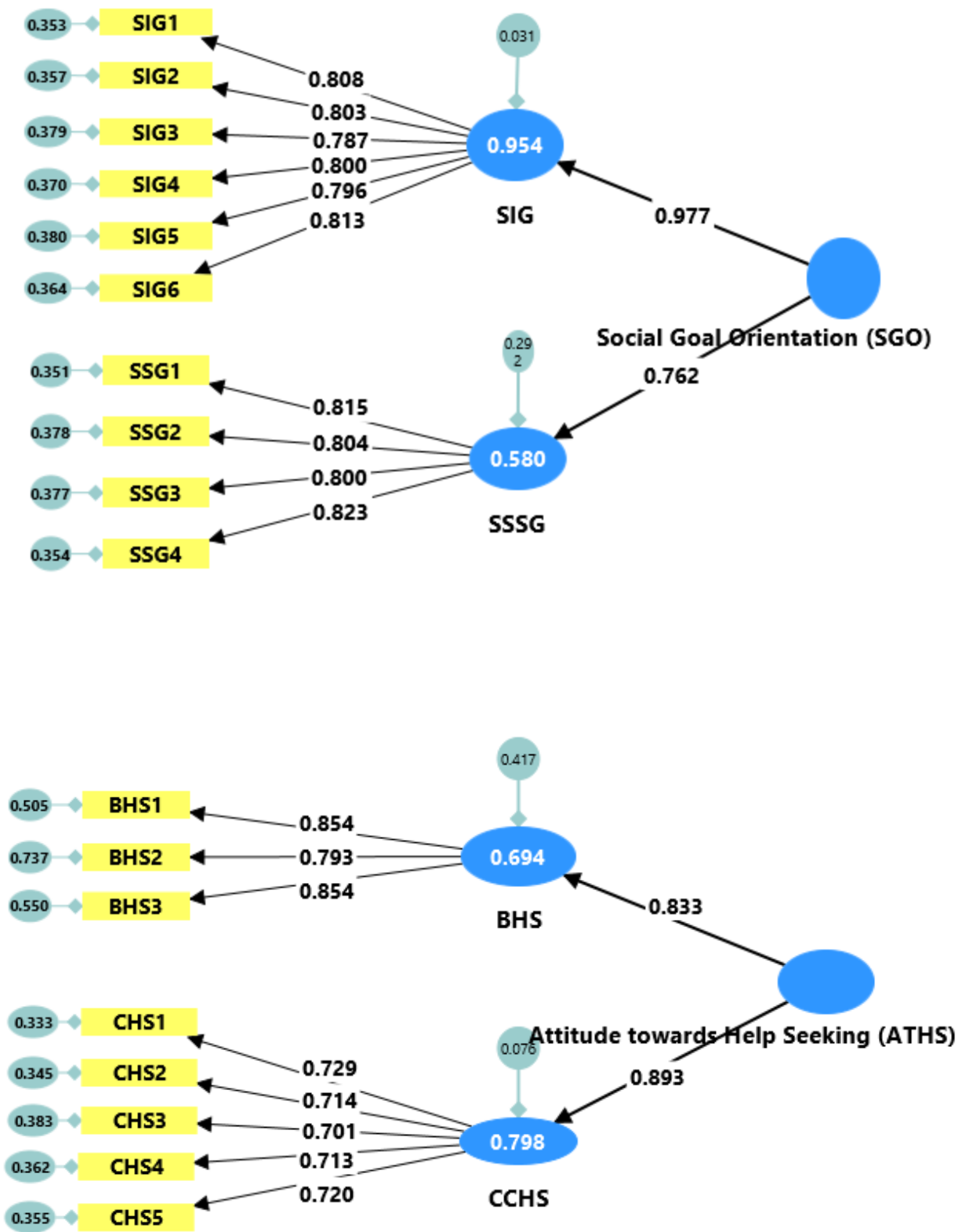
Model fit indexes of Academic help seeking behavior (First – Order)

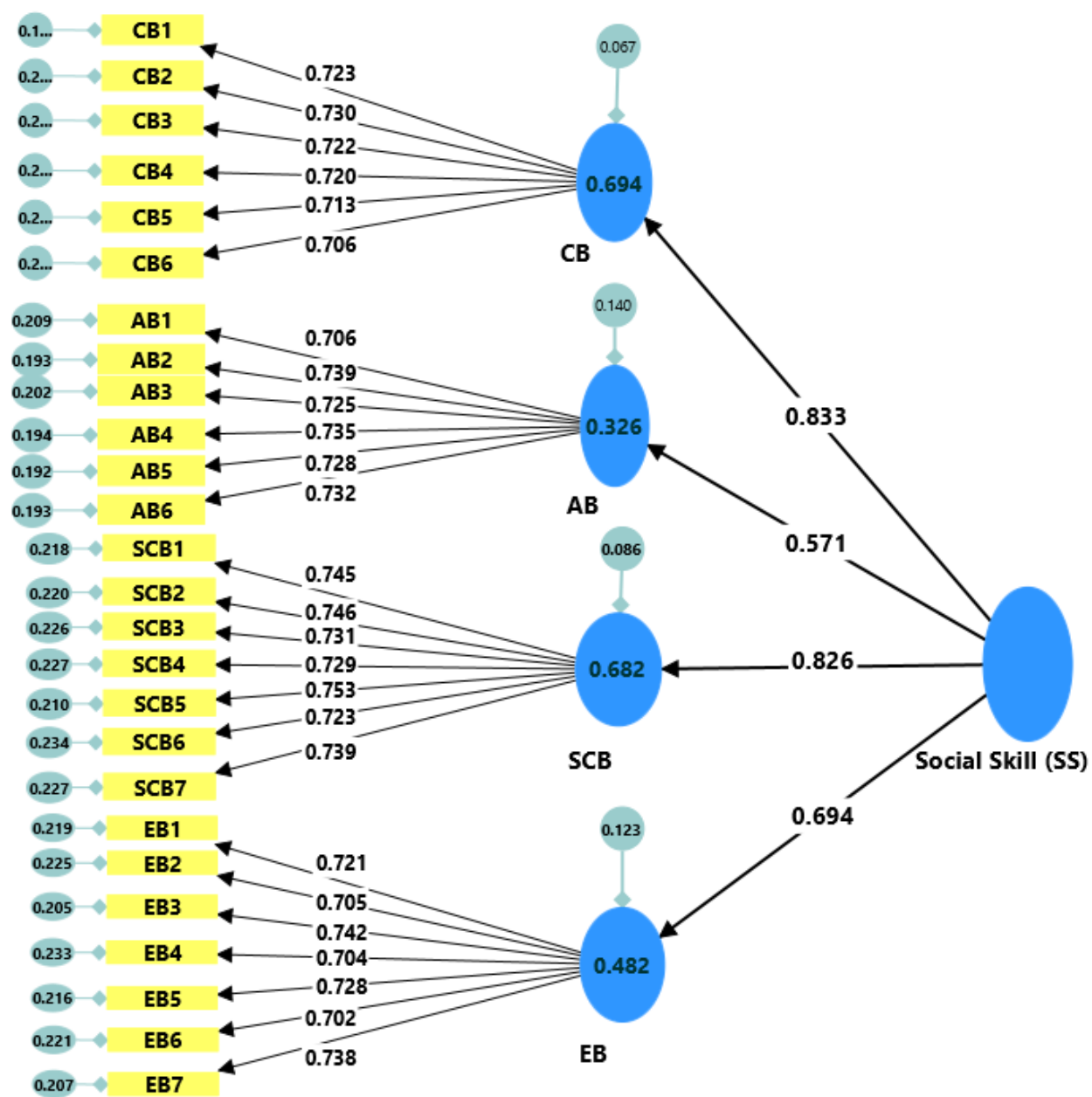
	Estimated model	Null model
Chi-square	386.818	10532.753
Number of model parameters	37.000	17.000
Number of observations	924.000	n/a
Degrees of freedom	116.000	136.000
P value	0.000	0.000
ChiSqr/df	3.335	77.447
RMSEA	0.050	0.288
RMSEA LOW 90% CI	0.045	0.283
RMSEA HIGH 90% CI	0.056	0.292
GFI	0.955	n/a
AGFI	0.941	n/a
PGFI	0.724	n/a
SRMR	0.020	n/a
NFI	0.963	n/a
TLI	0.969	n/a
CFI	0.974	n/a
AIC	460.818	n/a
BIC	639.481	n/a

Residuals Statistics^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	39.5294	88.1975	62.0422	13.24453	924
Std. Predicted Value	-1.700	1.975	.000	1.000	924
Standard Error of Predicted Value	.214	.880	.441	.111	924
Adjusted Predicted Value	39.4058	88.1931	62.0409	13.24516	924
Residual	-20.33920	26.98100	.00000	6.16836	924
Std. Residual	-2.290	2.365	.000	.998	924
Stud. Residual	-2.299	2.378	.000	1.001	924
Deleted Residual	-20.44881	27.14487	.00134	6.20197	924
Stud. Deleted Residual	-3.317	4.422	.000	1.002	924
Mahal. Distance	.106	17.706	3.996	2.754	924
Cook's Distance	.000	.023	.001	.002	924
Centered Leverage Value	.000	.019	.004	.003	924

a. Dependent Variable: MA







APPENDIX IV: Structural Model (Output of Smart PLS)

