EXPLORING THE RELATIONSHIP BETWEEN FAMILY-BASED WORK AND SELF-EFFICACY AMONG 15-YEAR-OLD ADOLESCENTS IN ETHIOPIA: EVIDENCE FROM THE YOUNG LIVES CHILDHOOD POVERTY STUDY

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ACRONYMS AND ABBREVIATIONS

ANOVA	-	Analysis of variance
ILO	-	International Labour Organization
LMIC	-	Low- and middle-income country
MOE	-	Ministry of Education
PYD	-	Positive Youth Development
SPSS	-	Statistical Package for the Social Sciences
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNICEF	-	United Nations Children's Fund
WHO	-	World Health Organization

ABSTRACT

Background – Adolescence marks a unique period in life where psychosocial skills are developed that are understood to positively affect the individuals' mental health and contribute to success in later life. Self-efficacy is a key psychosocial skill that describes the individuals' belief of their capability to exercise control over their life. While family-based work (economic and non-economic activity performed for and within the family) often is an integral part to maturing into adulthood in low- and middle-income countries, its impact on psychosocial skills is under-researched.

Objective – The objective of this study was to explore the relationship between family-based work and its duration, and general self-efficacy among 15-year-old adolescents in Ethiopia. To gain a more comprehensive understanding of the relationship, an ecological approach was adopted. While a variety of ecological factors are worth considering, this study assessed the influence of time spent at school and the adolescent-parent-relationship as additional independent variables.

Data and Methods – The study utilized secondary data from Round 5 (2016-2017) of Young Lives' longitudinal study of childhood poverty conducted in Ethiopia. The sample comprised of 1620 adolescents who were approximately 15 years old at the time of the data collection. Hierarchical multiple regression was used to firstly, determine which independent variables help explain the dependent variable, and secondly identify the positive or negative relationship and magnitude of an association between independent and dependent variables.

Results – In adjusted linear regression models a small, but negative and statistically significant association between working hours and self-efficacy was observed. Time spent at school was found to slightly amplify the negative impacts of family-based working hours on adolescents' self-efficacy levels. In contrast, the parent-adolescent-relationship attenuated the negative impact.

Discussion and Conclusion – The study results indicate that family-based working hours do not impact largely on Ethiopian adolescents' belief about their capabilities to shape their destiny. Further, the results lend support to researchers arguing working and attending school simultaneously are competitive in terms of psychosocial development. Moreover, the results substantiate findings from previous literature that assign the family a vital role in forming adolescents' self-efficacy beliefs. Further quantitative and qualitative research may expand on the findings of this study and thereby contribute to the design of policy interventions that are respectful to adolescents' agency and translate meaningfully to their work.

1. INTRODUCTION

1.1 BACKGROUND

1.1.1 ADOLESCENT HEALTH AND DEVELOPMENT

Ensuring health and promoting well-being is goal number three of the 17 Sustainable Development Goals outlined in the 2030 Agenda for Sustainable Development (United Nations, 2015). This goal was recognised much earlier as reflected for example in the Ottawa Charter stating health to be a key resource to everyday life, in that it supports personal and social development and enables human beings to exercise control over their own health (World Health Organization, 1986). The foundations for health and well-being throughout the life-course are often laid during adolescence[1] (Klasen & Crombag, 2013; Patton et al., 2016; Sawyer et al., 2012). It is the time were identities and future aspirations (Cunnien et al., 2009), as well as health practices are developed that continue into adulthood (Brindis et al., 2004). Although the period is recognised as crucial for development, adolescents are often neglected in health promotion research and global health policy (Erskine et al., 2017; Hayes et al., 2021; Patton et al., 2016). This becomes particularly clear examining research on adolescent mental health in low- and middle-income countries (LMICs) – as of 2013, only about a tenth of the worldwide mental health research was carried out in LMIC, of which less than 1% addressed child and adolescent mental health problems (Klasen & Crombag, 2013). In Sub-Saharan Africa adolescents make up nearly one fourth of the population (23%) (UNICEF, 2019). Recognising and understanding factors that enable and promote good health among this large population group is vital to ensure they can reach their full potential. Policies for prevention and early intervention strategies should be designed accordingly to serve the needs of adolescents (Hayes et al., 2021).

More frequently, psychosocial skills, also referred to as non-cognitive skills, have been recognised to play an important role in protecting from adverse health and enabling success in later life (Kautz et al., 2014; Yorke & Portela, 2018). They can be loosely defined as «personality traits, goals, character, motivation, and preferences that are valued in the labour

[1] As suggested by the World Health Organization (WHO), this study defines individuals aged 10-19 as adolescents (WHO, n.d). Children are defined as anyone under the age of 18, as stated in the Convention on the Rights of the Child (1989). Consequently, adolescents are encompassed in the definition of children. This thesis uses the terms child and children when referring to literature or policies that do not further define the studied age group. Otherwise, the term adolescent is used as it is more exact in referring to a specific age group.

market, in school, and in many other domains» (Kautz et al., 2014, p. 7). Psychosocial skill development has its onset in the early years of life but remains crucial during adolescence. The formation is highly shaped by adolescents' environments, specifically the family (Kautz et al., 2014), and mediated by cultural beliefs and values (Woodhead, 2004). While these influences are recognised as important to the development of psychosocial skills, further research is needed to investigate in more detail how psychosocial skills are formed (Krishnan & Krutikova, 2010).

One key psychosocial skill is self-efficacy, a concept which refers to the individual's perception of their ability to effectively exercise control over their own functioning and other events that affect their life (Bandura, 1994; Schwarzer & Jerusalem, 1995). In other words, self-efficacy is a mechanism of human agency shaped by the belief in one's ability to succeed (Dercon & Singh, 2013; Lippman et al., 2014; Yorke & Portela, 2018). To illustrate, adolescents with high self-efficacy approach a difficult task or situation with confidence and consequently are more likely to succeed in solving it, while low levels of self-efficacy can restrict problem solving (Bandura, 2004; Burrus & Brenneman, 2016; Yorke & Portela, 2018). Thus, self-efficacy is a vital skill especially to those who are likely to face many challenges, adverse situations, and setbacks throughout their life course.

1.1.2 ADOLESCENT WORK

An important but controversial feature of adolescents living in LMICs, both in contemporary research and global policy discourse, is their occupational status. In 1999 the International Labour Organization (ILO) set forth a convention to ban «work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children» (Worst Forms of Child Labour Convention No. 182, 1999, Article 3d) to ensure work does not deprive children of their childhood, their potential and their dignity or interfere with their education (ILO, 2019). This definition gave rise to the term *child labour*, which has been used ever since to refer to harmful and hazardous work. According to Woodhead (2004), the main obstacle to the ILO definition is the cultural relativism it encompasses. What is harmful to a child's development and what is not is subject to cultural interpretation (Libório & Ungar, 2010). Therefore, this thesis deliberately employs the more neutral concept of *work* to avoid a prejudgement of activities as necessarily detrimental to health (Sturrock & Hodes, 2016).

While a comprehensive discussion about whether work is permissible or not is beyond the scope of this thesis, the opposing positions related to psychosocial health impacts of work should nevertheless be mentioned briefly: Commonly, work is understood as a «menace in a child's development, with risk of psychosocial difficulties» (Fekadu et al., 2006, p. 958).

Among working children and adolescents, multiple studies have reported an increased prevalence of emotional and behavioural disorders such as depression, anxiety, and low self-esteem (Feeny et al., 2021; Fekadu et al., 2006; Hesketh et al., 2012; Kiran et al., 2007; Trinh, 2020). These adverse psychosocial health impacts are primarily associated with economic work. In opposition to that, other researchers have found that particularly non-economic activities such as household chores and caring for family members are positively associated with adolescents' psychosocial health (Feeny et al., 2021; Libório & Ungar, 2010; Pankhurst et al., 2015; Trinh, 2020), as they contribute to learning practical and social skills as well as responsibility (Aufseeser et al., 2018; Boyden et al., 2016; Morrow & Boyden, 2018). An additional important factor that is believed to affect psychosocial health impacts of different types of work is the number of hours spent on the respective activity. It is assumed that excessive working hours, despite whether carried out in economic or non-economic activity, are detrimental to the psychosocial health of children (Worst Forms of Child Labour Convention No. 182, 1999).

However, psychosocial health impacts are not solely determined by the type of work activity and its duration. Instead, healthy development in the context of work is shaped by a multitude of contextual factors, including competing or complementary activities, parent, peer and employer relations, or subjective meaning attached to work, among others (Lerner et al., 2005; Thomas & Joseph, 2013; Woodhead, 2004). Such factors are understood to either amplify or attenuate the impacts on psychosocial health. To exemplify, in a context where work is valued and the adolescent is faced with respect and reasonable expectations, performing vehicle repair might result in an increased sense of autonomy and responsibility. In contrast, the same work activity could have adverse psychosocial health effects in a context where school is valued more than work, but the adolescent is unable to attend or perform well in school because of the economic obligation to support the family. Consequently, to avoid generalised conclusions, assessments of psychosocial health impacts of work should be embedded in an ecological approach, facilitating a more comprehensive understanding of the complex relationship.

1.2 STUDY AREA: ETHIOPIA

The country of interest for this thesis is Ethiopia, located in the Horn of Africa, and home to approximately 115 million people (World Population Review, 2021). In Ethiopia, one in four is an adolescent, representing the second largest adolescent population in Africa (Performance Monitoring for Action, 2017; Yaya et al., 2021). Thus, exploring and understanding factors that contribute to their psychosocial health is crucial to inform future health promotion research and

policy interventions to ensure adolescents can reach their full developmental potential as they mature into adulthood.

The latest study on the general prevalence of mental disorders among 5-15-year-old Ethiopian adolescents revealed a prevalence of 3.5% (Ashenafi et al., 2001). Among working adolescents, this number seems to be a lot higher. Two studies conducted among working adolescents in Ethiopia in 2006 report prevalence rates of mental disorders of 4.9% (Alem et al., 2006), and up to 20.1% (Fekadu et al., 2006). These empirical findings reinforce Ethiopian national policy guidelines where focus is put on the protection of young people from exploitative practices and hazardous work that is harmful to their education and well-being – also known as child labour (Constitution of the Federal Democratic Republic of Ethiopia, 1995, Article 36). The minimum age for employment was recently raised from 14 to 15 years (Global People Strategist, 2021). In addition, adolescents (14-18 years) should not work for more than seven hours a day (Ethiopian Labour Proclamation No. 42, 1993, Section 90).

Despite the rigid legal framework, a national survey on child labour conducted in 2015 suggests that 85.5% of children between the ages of 5-17 are engaged in some form of work, including paid and unpaid activity of economic and non-economic nature (Central Statistical Agency of Ethiopia, 2018). To be more precise, the majority of all working children work within the family unit (Central Statistical Agency of Ethiopia, 2018; ILO, 2017). Typical tasks performed for and within the family include household chores such as cooking and cleaning or caring for family members including younger siblings (Central Statistical Agency of Ethiopia, 2018). In addition, agricultural work on the family farm is of great importance, specifically in Sub-Saharan Africa (ILO & UNICEF, 2021). Throughout the thesis, the term family-based work is used to refer to those types of work that contribute to the functioning and subsistence of the family.

Even though a majority of children engage in family-based work, the psychosocial health impacts have not yet been adequately researched. It is essential, however, to understand the origins of good psychosocial health, given that it can avert adverse mental health and facilitate success in later life (Kautz et al., 2014; Klasen & Crombag, 2013). Therefore, this thesis seeks to explore the relationship between family-based work and general self-efficacy among 15-year-old adolescents in Ethiopia. By pursuing an ecological approach, the study aspires to gain a more comprehensive understanding of the complex relationship. To address the study objectives, secondary data from Young Lives, a longitudinal study on childhood poverty, is utilised.

This thesis is organised into eight chapters. In chapter 2, the conceptual framework is outlined, followed by a synthesis of the most relevant literature on the topic in chapter 3. Derived from the identified gaps in the literature, chapter 4 presents the study objectives and research questions to be addressed in this study. The employed research methods and ethical considerations are described in chapter 5, before the results of the analysis are presented in chapter 6. Chapter 7 offers a discussion of the results in the context of the relevant literature and conceptual framework, while also examining limitations and strengths. Finally, chapter 8 discusses policy implications and concludes based on the central results.

2. CONCEPTUAL FRAMEWORK

There is no common approach to assessing the psychosocial impacts of adolescent work (Ibrahim et al., 2019; Kuimi et al., 2018; Sturrock & Hodes, 2016). However, in 2004, Martin Woodhead (2004) published a framework for research on psychosocial impacts of child work that has become influential in the field (Al-Gamal et al., 2013; Hesketh et al., 2012; ILO, 2014; Trinh, 2020). Hence, this framework was deemed appropriate to inform the empirical analysis and guide the discussion of results of this thesis. Woodhead's (2004) framework and the concept of self-efficacy can be placed within the overall theoretical field of Positive Youth Development (PYD), which is introduced in the following section before presenting the framework's key components relevant to this study.

2.1 POSITIVE YOUTH DEVELOPMENT

Positive Youth Development is a comprehensive interdisciplinary approach that is organised around the principle of promoting «youth access to positive experiences, resources and opportunities, and [promotion] of developmental outcomes useful to both self and society» (Benson et al., 2007, p. 895). Within these promotion efforts, the individual is thought of as an active shaper of positive development. To achieve positive developmental outcomes, the capacities and strengths of the individual need to «optimally interact with the resources for healthy development in the ecological system of the adolescent» (Thomas & Joseph, 2013, p. 117). In line with this statement, Lerner et al. (2005) further elaborates that psychosocial development can be understood as a consequence of «mutually influential relationships between the developing person and his or her biology, psychological characteristics, family, community, culture, physical and designed ecology, and historical niche» (p.11). Consequently, the complex systems in which adolescents experience development need to be acknowledged and carefully examined.

2.2 A FRAMEWORK FOR ASSESSING PSYCHOSOCIAL IMPACTS OF WORK

As part of a joint research project by ILO, World Bank, and UNICEF, Woodhead (2004) developed "Psychosocial impacts of child work: a framework for research, monitoring and intervention". Essentially, the framework offers a guide for:

> assessing the multiple ways that work can impact (both positively and negatively) on children's well-being; and for identifying psychosocial indicators of impact. The paper draws attention to ways that the context of children's work mediates how far potential hazards constitute a risk (Woodhead, 2004, p. 321).

Positioned within the PYD perspective, Woodhead (2004) ascribes young people an active role, and thus recognises children's agency in relation to their work. More importantly, he repeatedly emphasises the importance of the ecological system surrounding the working child. Before presenting the key contextual influences set forth by Woodhead (2004) and applying them to this study, the following paragraph outlines his definition of psychosocial well-being and extends it to include the definition of self-efficacy coined by Albert Bandura.

Woodhead (2004) classifies psychosocial well-being into five broad domains: sense of personal agency, cognitive abilities, social competence, personal identity, and emotional and somatic expressions of well-being. The concept of self-efficacy is considered as part of the domain "sense of personal agency". According to Woodhead (2004), «agency is about how far an individual is able to shape their destiny versus being shaped by external forces outside their control» (p. 355). The concept of personal agency employed by Woodhead (2004) closely relates to the concept of self-efficacy that was coined by Albert Bandura (1977) as part of his Social Cognitive Theory. Bandura (1994) describes self-efficacy as «people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives» (p. 71). An individual with high self-efficacy approaches a difficult task or challenge convinced of their capabilities and consequently realises a favourable outcome which reinforces a strong sense of self-efficacy (Bandura, 2004). In other words, the effects of self-efficacy are understood to be reciprocal. Both the concept of personal agency and the concept of self-efficacy allow for an outlook on children's work that is in line with the PYD perspective, emphasising the active role of children in creating meaning and contributing to social life.

According to Woodhead (2004), work does not impact on psychosocial health in a vacuum. Consequently, an assessment of the effects of work on dimensions of psychosocial health, including self-efficacy, need to take the complexity and interplay of the children's activities (e.g., type of work and schooling), their environment (e.g., relationship to parents)

and the social context (e.g., value attached to work) into account. From Woodhead's (2004) understanding, the context in which work occurs «may be as important as the work itself in determining how far the impacts are beneficial or harmful» (Woodhead, 2004, p. 334). He points out that assessing a specific type of work activity without considering the circumstances in which it takes place is of limited value. Therefore, Woodhead (2004) identifies seven major influences that are likely to be present in a child's ecological system and, at length, discusses the extent to which they can be protective of or have adverse consequences for psychosocial health of working children. The influences under analysis for this study are schooling and adolescent-parent-relations (Woodhead, 2004). According to Woodhead (2004), a contextual factor like schooling can either amplify or attenuate the psychosocial impact of work. He argues that having to work in a context where attending school is the norm can feel degrading. Feeling an economic obligation to work in order to support the family, while at the same time experiencing pressure to perform well in school, too, can adversely impact on children's psychosocial health. On the other hand, well-balanced school and work attendance can feel empowering, with positive school experiences potentially buffering negative work impacts. Similarly, the effects of the adolescent-parent-relationship can be two-fold, especially in a setting where the family constitutes the work environment. While the family normally is a source of security, unreasonable parental expectations in terms of work contributions can have adverse effects (Woodhead, 2004). Moreover, the family is a closed-off space, where abuse and exploitation are even less visible than in official employment. In contrast, the support and encouragement of family members, specifically the parents, can avert adverse psychosocial health impacts of work.

To reiterate, the aim of this study is to shed light on the relationship between family-based work and self-efficacy among adolescents in Ethiopia. However, in considering the ecological principle set forth by Woodhead (2004), the study moves beyond the mere exploration of the psychosocial impacts of a specific work activity and additionally takes schooling and the adolescent-parent-relationship into account. For the purpose of this study, both of these ecological factors are of great importance given that young people in Ethiopia attend school in addition to their work (Central Statistical Agency of Ethiopia, 2018) and because the family constitutes the work environment. Considering schooling and adolescent-parent-relations guards against overly simplistic conclusions and allows for a more holistic understanding of the relationship between family-based work and self-efficacy among Ethiopian adolescents.

3. LITERATURE REVIEW

The purpose of the literature review was to review and synthesise the most significant academic articles published on the relationship between adolescent work and psychosocial health, and to map out research gaps. To find relevant literature, the academic databases PsycInfo, Web of Science and PubMed were searched using terms such as 'adolescence', 'youth', 'child labour', 'child work', 'family work', 'schooling', 'health', 'psychosocial skills', 'self-efficacy' and 'Ethiopia'. Peer-reviewed articles as well as findings from the grey literature were considered, there was no limitation on the year of publication. Manual checks of the reference lists of useful sources completed the search strategy.

3.1 PSYCHOSOCIAL HEALTH IMPACTS OF WORK

As pointed out in the Introduction (chapter 1) children most commonly perform work for and within the family (ILO & UNICEF, 2021). However, the majority of studies found during the literature search employ a different classification of work, where assessments of psychosocial health impacts are frequently distinguished by economic and non-economic work activities, a classification that was adopted for the subsequent sections of the literature review. The differences in operationalisation of work activities and its implications for this study will be addressed in detail in the discussion (chapter 7). Independent of the type of activity studied, the discourse remains fragmented, with a relatively equal proportion of articles highlighting psychosocial health risks and those pointing out the psychosocial benefits of work.

3.1.1 ECONOMIC ACTIVITY

A number of studies indicate that compared to non-working children, children and adolescents performing economic activity are more prone to behavioural and emotional problems, indicating adverse psychosocial health (Feeny et al., 2021; Fekadu et al., 2006; Hesketh et al., 2012; Kiran et al., 2007; Trinh, 2020). For instance, in their study among 12-18 year-old adolescents in India, Feeny et al. (2021) document a negative association between economic work and self-efficacy, with working adolescents reporting significantly lower self-efficacy levels. Similarly, a study examining the mental health impacts of child labour in Vietnam finds that the psychosocial health of 7-9-year-old working children is significantly lower when compared to their non-working peers (Trinh, 2020). However, child labour is only vaguely defined (as any paid or unpaid activity apart from household chores), limiting the studies' ability to attribute the identified negative psychosocial effect to a specific economic activity. In contrast, Hesketh et al. (2012) focus their research on a single activity, namely domestic work

for other households, which is widely understood to bear a higher risk of exploitation and abuse due to its isolated nature (ILO & UNICEF, 2021; Woodhead, 2004). Among the studied 12-18-year-old adolescents, domestic workers report psychosocial disorders more frequently than non-working schooled adolescents. However, the study of Hesketh et al. (2012) also comes with a limitation, as it does not employ a validated instrument to assess psychosocial well-being, but a questionnaire developed by the researchers, making a comparison to other studies difficult. Lastly, a psychiatric prevalence study among working and non-working 5-15-year-old Ethiopians finds emotional and behavioural disorders to be more common among exclusively working children than their non-working schooled peers (Fekadu et al., 2006).

Even though the presented findings confirm a negative association between economic work and psychosocial health, the evidence on the relationship is not entirely conclusive. To exemplify, Alem et al. (2006) carried out a prevalence study in Ethiopia with study characteristics similar to those of Fekadu et al. (2006). Both studies were carried out in the same year, in a similar study area, among children of much the same age who engage in comparable activities, and still find contradicting results. In contrast to Fekadu et al. (2006), Alem et al. (2006) report emotional and behavioural disorders to be more common among non-working schoolchildren when compared to children who engage in economic activity. The researchers suggest that a lower prevalence of disorders among working children compared to non-working children could be explained by the healthy-worker effect, where children of good health are more likely to be retained in the work force and children with illness join the non-working population (Alem et al., 2006). Although this might explain the higher prevalence in mental and behavioural disorders among non-working children, it cannot explain the conflicting findings of the two studies. Other studies further underline this discrepancy in empirical evidence. Findings from Jordan (Al-Gamal et al., 2013) and Brazil (Benvegnú et al., 2005) also reveal psychosocial problems to be more common among non-working children than their working peers, suggesting that work in fact is not detrimental but might be protective against mental and behavioural problems. In contrast, de Baessa (2008) and Nuwayhid et al. (2005) find no significant difference in psychosocial well-being across groups of working and non-working children.

3.1.2 NON-ECONOMIC ACTIVITY

The empirical evidence on non-economic activities is less contradicting than that on economic activity. Generally, household chores such as cooking, cleaning, and shopping or looking after family members are thought to benefit the psychosocial health of children (Feeny et al., 2021;

Libório & Ungar, 2010; Pankhurst et al., 2015; Trinh, 2020). For instance, Trinh (2020) finds household chores to be positively associated with psychosocial health among 7-9-year-old children in Vietnam, but reports mixed results for India. The researcher reasons that by equipping children with more skills and fostering a sense of self-worth, household chores can improve psychosocial health. Similarly, Feeny et al. (2021) report that there is no indication that household chores lead to lower levels of self-efficacy, if anything, activities such as caring for other household members are likely to result in higher levels of emotional well-being. Next to promoting skills and a sense of self-worth or even autonomy (Libório & Ungar, 2010), a positive association between non-economic activity and psychosocial health could also be explained as follows: «Household chores inside the home are potentially performed in reasonably safe conditions or under adult supervision. Conversely, work outside the home is potentially more hazardous due to surrounding conditions and lack of supervision» (Feeny et al., 2021, p. 891). In contrast to the previously presented literature on psychosocial impacts of economic activity, the family work environment is repeatedly emphasised as potentially protective against psychosocial harm (Libório & Ungar, 2010; Pankhurst et al., 2015). Section 3.3.2 draws a more nuanced picture of the family as the work environment, with specific focus on the adolescent-parent-relationship.

3.2 IMPORTANCE OF WORK CHARACTERISTICS

A majority of studies introduced in the previous section assess psychosocial health impacts merely through the presence or absence of work in children's and adolescent's lives. A growing body of research, however, suggests that the operationalisation of work must go beyond such a dichotomous categorisation (ILO, 2014; Woodhead, 2004). In previous studies, inter alia, the relationship with the employer (Nuwayhid et al., 2005), the safety of the physical work environment (Lewendon et al., 2001), or the age of entry into the work force (Benvegnú et al., 2005) were found to be important work characteristics associated with psychosocial health. In addition, authors repeatedly place emphasis on work duration (Al-Gamal et al., 2013; Caglayan et al., 2010; Dinku et al., 2019; Hesketh et al., 2012; Kiran et al., 2007; Nuwayhid et al., 2005; Orkin, 2012). It is assumed that excessive work, despite whether it is of economic or non-economic nature, is hazardous and thus detrimental to the psychosocial health of children (Worst Forms of Child Labour Convention No. 182, 1999). Supportive of this assumption, a study suggests long working hours of more than 10 hours per day to negatively affect psychosocial health (Hesketh et al., 2012). However, the direct association between long working hours and psychosocial health is only seldom assessed. Instead, the effects of excessive

work are commonly studied in terms of children's general time allocation. For instance, long working hours have been found to impede school attendance (Lyon et al., 2013; Steinberg & Dornbusch, 1991) and obstruct sufficient sleep (Caglayan et al., 2010); factors which could negatively affect psychosocial health.

3.3 IMPORTANCE OF ECOLOGICAL FACTORS

As aforementioned, adolescents' ecology plays an important role in understanding and assessing psychosocial impacts of work. The following two sections will discuss empirical evidence on the two influences, schooling, and adolescent-parent-relations, that were introduced as part of the conceptual framework in chapter 2.

3.3.1 WORK AND SCHOOL

It is dominant policy consensus that children and adolescents under the age of 18 should not work but attend school (Minimum Age Convention No. 138, 1973). This consensus is based on the conviction that schooling and finishing compulsory education is crucial to psychosocial development of a child (UNESCO, 2016). While the positive effects of schooling on psychosocial health are relatively undisputed, the debate around the impact of child and adolescent work on schooling remains fragmented. Combining work and schooling is often understood to be competitive, leading to inconsistent school attendance (Pal et al., 2011; Pankhurst et al., 2015; Ray & Lancaster, 2005), low educational achievement (Orkin, 2013; Woldehanna & Gebremedhin, 2015) or even school drop-out (Tafere & Pankhurst, 2015b). In other words, «working may make it impossible, or more difficult, for children to attend school, or prevent them from benefiting fully from it» (Orkin, 2012, p. 1). This presumption is supported by a study carried out among 6-16-year-olds in Jordan that compares levels of coping efficacy across exclusively working children, working schoolchildren, and non-working schoolchildren (Al-Gamal et al., 2013). The results show that working schoolchildren had the lowest coping efficacy levels when compared to exclusively working and exclusively schooled children. Consequently, it does seem as though combining work with school is competitive, putting children at risk for adverse psychosocial health. At the same time, Orkin (2012) has argued that work and schooling can be complementary when each activity is carried out at different times of the day, enabling children to benefit from both activities in terms of psychosocial skill development. This is underlined by Hesketh et al. (2012) who report school attendance to be highly beneficial for positive psychosocial outcomes among adolescent domestic workers in India and the Philippines. Complementary work and schooling could be

achieved through school shift systems where children attend school in the morning and perform work in the afternoon or vice versa (Admassie, 2003). Tafere & Pankhurst (2015b) highlight the importance of flexible school systems in contexts where work is the norm rather than the exception (see also Orkin, 2012). In a similar vein, Boyden (2016) argues that for the majority of children in low- and middle-income countries «the choice is not between school and work but rather how much time and effort should be given to each activity» (p. 11).

3.3.2 ADOLESCENT-PARENT-RELATIONSHIP

Previously, in the section on psychosocial impacts of non-economic activity, the importance of the family work environment has been pointed out. Specifically, the adolescent-parent-relationship can have substantial implications for the direction and magnitude of psychosocial health impacts (Hesketh et al., 2012; Pankhurst et al., 2015; Woodhead, 2004). In fact, Maciel et al. (2013) find that the family functioning is more significant to the prediction of children's psychosocial health than their working status. As aforementioned, it is widely assumed that the family offers safe working conditions (Feeny et al., 2021; Pankhurst et al., 2015), while working for an employer might expose children to undesirable role models and adverse habits (Nuwayhid et al., 2005). At the same time, the ILO and UNICEF (2021) warn that family-based work is frequently hazardous. Following on from this, Woodhead (2004) elaborates that when family-based work becomes excessive, exploitative or abusive «family-based child-workers may be at even greater risk than children working outside their families» (p.345) because the family is the main source of social support and children psychologically depend on their parents. Pankhurst et al. (2015) illuminate some of the risks and benefits of family-based work in their qualitative study of working children in Ethiopia. For instance, children report they never refuse to work because they fear punishment and do not want to strain the relationship with their parents, while others describe family-based work as an opportunity to actively contribute to the benefit of the family. In connection to the latter, Libório and Ungar (2010) theorise that child contributions can improve psychosocial health by enhancing resilience, sense of autonomy and coping capacity.

3.4 OTHER SALIENT FACTORS ASSOCIATED WITH PSYCHOSOCIAL HEALTH

Besides work, schooling and adolescent-parent-relations, the above-mentioned studies discuss additional, mainly socio-demographic, factors in the context of work and psychosocial health.

This chapter introduces, in a very condensed form, a selection of these recurring factors and their potential effects.

Sex

Assessments of psychosocial health impacts of work in the context of gender is relevant as gender can impact on the type of work activity performed, with boys engaging more frequently in economic activities such as agricultural work and girls more likely to perform domestic work for other families or household chores within their own home (ILO & UNICEF, 2021). Given that economic activities are more frequently associated with adverse psychosocial health compared to non-economic activities, this could result in gendered differences in psychosocial impacts. This is exemplified by Trinh (2020) who studies the relationship between economic work and mental health in the context of gender. He finds that while females report reduced psychosocial problems in India, the psychosocial health of their male counterparts is negatively affected by economic activity. In contrast, the study of Benvegnú et al. (2005) observes more psychosocial problems among working girls than working boys, while other articles suggest no difference between working males and females in regard to prevalence of psychosocial health problems (Alem et al., 2006; Maciel et al., 2013).

Health

Overall, good physical and mental health is thought to buffer effects of psychosocial adversity. For instance, better physical health, as measured by the BMI index, is associated with less psychosocial health problems among 7-9-year-old working children in Vietnam (Trinh, 2020). Based on this result, it could be assumed that good health makes children less vulnerable to specific tasks or longer working hours. In line with these findings, Hesketh et al. (2012) find general poor health to be negatively associated with psychosocial health among adolescents in India and the Philippines.

Socioeconomic status

The socioeconomic status of a family, often measured as household or family income, is thought to be an important determinant of whether children work (Beegle et al., 2009; Tafere & Pankhurst, 2015b). Especially in times of economic hardship, children and adolescents become important contributors to the family subsistence (Boyden et al., 2016). Taking on such a

responsibility could arguably increase coping capacity (Libório & Ungar, 2010). At the same time, involuntarily performed work that is entirely at the discretion of the socioeconomic status of the family could inflict on the child's psychosocial health. Evidence from studies that take family income into account suggests the latter. Benvegnú et al. (2005) find an inverse association between family income and psychosocial health of working children. Further, Maciel et al. (2013) find children who report higher psychosocial health problems to come from households with lower income.

Value attached to work

Woodhead (2004) highlights on multiple occasions the importance of subjective meaning children attach to their work: «When children feel their work is a normal thing to do, that they are doing something valued by their families, and they are treated fairly, these feelings can serve as a coping mechanism that helps their resilience» (p. 367) (see also African Child Policy Forum, 2014; Cunnien et al., 2009). More generally, Trinh (2020) argues that socially and culturally accepted child work can lead to better psychosocial health.

3.5 RESEARCH GAPS

Within the body of research that is concerned with psychosocial health impacts of work there is a clear imbalance. The majority of studies measure impacts of economic work activity, while very few studies shed light on the association between non-economic work activity and psychosocial health, and even fewer studies discuss family-based work. Particularly the scarcity of articles on family-based work is surprising, given children most commonly perform work for and within the family (ILO & UNICEF, 2021). In addition, self-efficacy has so far only sparsely been explored in relation to adolescent work.

While a majority of articles suggest economic activity to be detrimental to the psychosocial health of children and adolescents, research on psychosocial impacts of non-economic activity indicates the opposite. However, the literature review shows that not only do different types of activity have a unique influence on psychosocial health, but that the extent of the impact is shaped by an additional factor, namely work duration. In addition, the adolescent-parent-relationship and schooling seem to play a role in the relationship of work and psychosocial health. But again, there is ambiguity in the evidence as to when both factors are beneficial or detrimental to psychosocial health. Thus, it becomes clear that no general assumptions about the relationship between work and psychosocial health can be made.

Within this field of research there are many avenues for future exploration; one of which is the assessment of activity- and context-specific psychosocial impacts of work. No study could be found that addresses the relationship between family-based work and its duration, and self-efficacy. In order to address this gap in the existing literature, objectives and research questions were formulated as outlined in the next chapter.

4. STUDY OBJECTIVES AND RESEARCH QUESTIONS

The objective of this study is to explore the relationship between family-based work and general self-efficacy among 15-year-old adolescents in Ethiopia, using secondary data from Young Lives. The study adopts a positive youth development perspective that views adolescents as active shapers of own positive development. The study further pursues an ecological approach that takes into account the importance of the context and the environment in which adolescents perform work activities. In doing so, the study aspires to create a more holistic understanding of the psychosocial impacts of adolescent work in the country-context of Ethiopia and thus contribute to the growing literature that is concerned with the mental health of working adolescents in low-and middle-income countries. Exploring the relationship between family-based work and self-efficacy can have important implications for policy and future research.

To address the relationship between family-based work and self-efficacy in more detail, several specific research questions will be answered:

1. To what extent is the number of hours spent on family-based work associated with general self-efficacy levels among 15-year-old adolescents in Ethiopia?
2. To what extent does the relationship between number of working hours and general self-efficacy levels change when taking hours spent in school and parent relations into account?
3. Are number or working hours, hours spent in school, and parent relations still able to predict a significant amount of variance in general self-efficacy levels after differences among adolescents in sex, subjective health, subjective household wealth, and pride in work have been statistically accounted for?

5. DATA AND METHODS

5.1 EPISTEMOLOGICAL FOUNDATION

It is important to recognise that the research design of this study «rests on a foundation of ontological and epistemological assumptions» (Neumann, 2014, p. 91). The study is inspired by the post-positivist paradigm, which can be considered a version of the traditional positivist approach to research. Post-positivism stems from the ontological idea that reality can be observed directly by the researcher (Neumann, 2014) and that truth is independent of the observer (Aliyu et al., 2014). Both positivism and post-positivism are frequently associated with quantitative methods (Punch, 2014).

5.2 THE YOUNG LIVES PROJECT

The current study analysed secondary data using Young Lives longitudinal study of childhood poverty conducted in Ethiopia between 2002 and 2016/17. The Young Lives project traces the lives of approximately 12,000 children in four developing countries, including Ethiopia. The children are divided into two age groups, a 'Younger cohort' born in 2001-2002 and an 'Older cohort' born in 1994-1995. Young Lives combines data collection on child, household and community level with school surveys to gather information on health and livelihoods as well as educational experiences (Rossiter et al., 2017).

5.2.1 YOUNG LIVES SAMPLING

Before the first survey round conducted in 2002, 20 sites were purposively selected (in five regions: Addis Ababa, Amhara, Oromia, Nationalities and People's Region (SNNP) and Tigray). A site obtained through purposive sampling «is deemed to represent a certain type of population, and is expected to show typical trends affecting those people or areas» (Young Lives, 2018, p. 2). The purposive sampling of Young Lives further ensures a reflection of the country's cultural and geographic diversity, but with a pro-poor bias (Rossiter et al., 2017). 100 young children (between six and 18 months) and 50 older children (between 7.5 and 8.5 years of age) were randomly selected in each of the 20 sites (Young Lives, 2018).

5.2.2 SURVEY INSTRUMENTS

The child, household, and community questionnaires are updated for each survey round and include, next to the core questions, relevant country specific sections (Young Lives, n.d.-a). The child questionnaire gathers data on daily activities of the child, experience with work and

school as well as attitudes and feelings. The household data includes information on household composition and expenditures, livelihoods, and access to basic services (Young Lives, n.d.-a). In addition, school surveys were conducted assessing student's learning levels through cognitive tests in English and Math.

5.3 STUDY SAMPLE

Round 5 of the Young Lives survey was conducted in the period of 2016-2017. At this point in time the younger cohort was approximately 15 years of age, the older cohort approximately 22 years of age. Since the aim of this thesis is to shed light on the relationship between engagement in work and psychosocial health of adolescents, only respondents from the younger cohort were included (*N*=1812). A sub-sample was drawn based on the following two criteria:

1. The adolescent reported being currently enrolled in school.
2. The adolescent had undertaken some form of paid or unpaid work activity within the last twelve months.

The final sample included 1620 adolescents: 863 males (51.6%) and 784 females (48.4%). See section 6.1 for a detailed univariate analysis of the sample.

5.4 STUDY VARIABLES

5.4.1 DEPENDENT VARIABLE

Self-efficacy

Young Lives first measured psychosocial skills in Round 2 and Round 3. After a thorough review and adaption procedure, psychosocial scales, including the self-efficacy scale, were administered to both cohorts in Round 4 and Round 5 (Yorke & Portela, 2018). The Young Lives general self-efficacy scale (based on Schwarzer and Jerusalem (1995)) intends to measure «the strength of an individual's belief in his or her own ability to respond to novel or difficult situations and to deal with any associated obstacles or setbacks» (Schwarzer & Jerusalem, 1995, p. 35).

Perceived general self-efficacy was assessed through ten items measured on a Likert scale ranging from 1 = strongly disagree to 4 = strongly agree. Based on the ten items a scale variable for total self-efficacy was created, ranging from 10 (lowest self-efficacy) to 40 (highest self-efficacy). The statements, inter alia, include: I can usually handle whatever comes my way

and I am confident that I could deal efficiently with unexpected events. See Appendix A for all scale items. Total general self-efficacy was treated as a continuous variable.

5.4.2 INDEPENDENT VARIABLES

Number of hours spent on family-based work

The main independent variable of this study is a continuous count variable computed from the number of hours spent on non-economic and economic activities within the family. The study participants were asked how much time they spent on the following non-economic activities during a typical day (not a weekend or holiday): care for others (younger children, ill household members) and domestic tasks (fetching water, firewood, cleaning, cooking, washing, shopping). In addition, study participants were asked how much time they spent on the following economic activities during a typical day (not a weekend or holiday): tasks on family farm, cattle herding, other family business, sheepherding (not just farming). The time for all activities was recorded in hours. Hereinafter, this variable is referred to as working hours.

Number of hours spent in school

The second independent variable is a continuous variable. All study participants were asked how much time they spent in school (including travelling) during a typical day (not a weekend or holiday). The time was recorded in hours.

Parent relations

The third independent variable is a continuous variable assessed through eight items measured on a Likert scale ranging from *1 = strongly disagree* to *4 = strongly agree*. Out of the eight items a scale variable for total parent relations was created, ranging from 8 (lowest parent relation) to 32 (highest parent relation). An example of a statement measuring parent relations is: *I like my parents.* See Appendix A for all scale items.

5.4.3 CONTROL VARIABLES

Sex is a dichotomous variable coded *0 = Male and 1 = Female.*

Subjective health is a self-reported variable captured by the question: *In general, would you say your health is very poor, poor, average, good or very good?* The item was measured on a Likert scale coded *1 =very poor, 2 = poor, 3 = average, 4 = good, 5 = very good.*

Subjective household wealth was measured with the question: *Which of the following best describes your household?*, with the following response categories: *1 = very rich, 2 = rich, 3 = comfortable, 4 = struggle to get by, 5 = poor, and 6 = destitute*.

Pride in work was captured by the statement *I am proud of the work I have to do* and was measured on a Likert scale ranging from *1 = strongly disagree* to *5 = strongly agree.*

5.5 DATA MANAGEMENT

Before conducting any analyses, the data was screened for missing data and errors such as out of range values. All data with the values not known (77), not applicable (88), missing (99), and refused to answer (79) were coded to missing. All analyses excluded cases pairwise with no replacement for missing data. In addition, all variables were inspected for normality and outliers classified as extreme by SPSS (marked by an asterisk). For the univariate and bivariate analyses, none of the extreme outliers had to be removed or their values changed since they did not have a strong influence on the mean of the respective variable (Pallant, 2020). Before conducting the multiple regression analysis, several outliers were removed (for detailed assumption checking see section 6.3.1).

Due to small numbers of observations, some categorical variables were collapsed into fewer categories. Originally, there were five categories for the subjective health variable which were recoded into four (1: very poor or poor, 2: average, 3: good, 4: very good). Subjective household wealth was also recoded into four categories (1: very rich or rich, 2: comfortable, 3: struggle to get by, 4: poor or destitute). Similarly, the categories for pride in work were changed. For this analysis, the variable was recoded into four categories, combining strongly disagree and disagree into one category (1: strongly disagree or disagree, 2: more or less, 3: agree, 4: strongly agree).

5.6 DATA ANALYSIS

IBM SPSS Statistics version 26 was used to assess the relationship between the number of hours spent on family-based work and self-efficacy levels among a sample of 15-year-old adolescents in Ethiopia. The following statistical analyses were performed:

(1) Descriptive statistics were obtained for all variables and presented using standard statistical parameters such as frequencies, percentages, means and standard deviations.

(2) Bivariate analyses were performed between the dependent variable and the independent variables using Pearson's product-moment correlation coefficient.

(3) Bivariate analyses were further performed between the dependent variable and all control variables using independent samples t-test (dichotomous variable), and one-way between-groups ANOVA (categorial variables).

(4) Hierarchical multiple regression was used to assess the relationship between working hours, time spent in school, and parent relations, and levels of self-efficacy in the adolescent sample. Furthermore, hierarchical multiple regression enabled controlling for the influence of the identified control variables.

According to Tinsley et al. (2000), there are two common approaches to multiple regression – prediction and explanation. The former focuses on practical applications, while the latter «tries to explain the relations between variables and emphasizes understanding the phenomena of interest» (Tinsley et al., 2000, p. 153). In explanatory modelling, multiple regression firstly determines which independent variables help explain the dependent variable, and secondly identifies the positive or negative direction of a relationship and magnitude of association between independent and dependent variables.

Hierarchical multiple regression allows to enter independent variables in an order specified by the researcher (Tabachnick & Fidell, 2013). By entering one independent variable after the other, each can be assessed in terms of its contribution to the model. For this study, the order of entry of variables was determined by the conceptual considerations presented in chapter 2. The regression analysis consisted of four models, each of which was evaluated with regard to their explanatory power, as well as magnitude and direction of the model coefficients. Since it is not the goal of this study to identify a model that has greatest explanatory power with the fewest number of variables, the principle of parsimony was neglected. All results were reported, including variables that did not reach statistical significance. For Model 1, self-

efficacy was regressed on working hours. For Model 2, self-efficacy was regressed on working hours (block 1) and hours spent in school (block 2). Model 3 consisted of working hours (block 1), hours spent in school (block 2), and parent relations (block 3). Lastly, for Model 4, self-efficacy was regressed on all control variables (simultaneously entered in block 1), followed by the three independent variables (simultaneously entered in block 2).

The outlined method of analysis describes a cross-sectional study design and hence is of observational and descriptive nature. While such a design does not allow for causality to be inferred, it helps to explore associations between variables in the study sample.

5.7 QUALITY ASSURANCE

5.7.1 RELIABILITY AND VALIDITY

Reliability tests to ensure internal consistency and unidimensionality of the self-efficacy and parent relations scale have previously been performed by Yorke and Portela (2018) using Cronbach's alpha and inter-item correlation. A Cronbach's alpha value of .7 or above indicates acceptable internal consistency, however, values of .8 and above are preferable (Pallant, 2020). For the younger cohort, Cronbach's alpha values of .80 and .82 were obtained for the self-efficacy and parent relations scale respectively, indicating all items measure the same construct (Yorke & Portela, 2018). For scales with ten or less items it can be useful to additionally report the mean inter-item correlation since these commonly produce lower Cronbach alpha values (Pallant, 2020). According to Pallant (2020) the optimal range for the mean inter-item correlation is between .2 and .4. For the younger cohort, Yorke and Portela (2018) obtained mean inter-item correlation values of .29 for the self-efficacy scale and .36 for the parent relations scale, suggesting reliability of both scales. Table 1 shows reliability testing of the scales for the sub-sample used in this study after cleaning each item of errors. The obtained values for the current study differ only slightly from those of Yorke and Portela (2018) which is likely due to the difference in the sample.

A previous assessment of the validity of the scale through multi-group confirmatory factor analysis showed unidimensionality with all items contributing to one factor (Yorke & Portela, 2018). Furthermore, an assessment of the Schwarzer and Jerusalem (1995) general self-efficacy scale across 25 countries confirmed the reliability and unidimensionality of the scale (Scholz et al., 2002). Because the validity of the self-efficacy scale has been assessed by Yorke and Portela (2018) using the same participants from the same country, the decision was made to not perform additional factor analysis.

Table 1 - Cronbach's alpha and mean inter-item correlations for the scale variables

Scale	Items	Current study		Yorke & Portela (2018)	
		Cronbach's α	Mean Inter-item Correlation	Cronbach's α	Mean Inter-item Correlation
Self-efficacy	10	.77	.25	.80	.29
Parent relations	8	.74	.26	.82	.36

5.7.2 GENERALISABILITY

Due to the previously described purposive sampling method, Young Lives data from Ethiopia faces limitations in terms of its generalisability. While the data is not nationally representative, potential biases resulting from the pro-poor sampling strategy have been addressed through tests comparing the Young Lives sample to larger, nationally representative samples (Young Lives, 2017). It was concluded that the Young Lives sample reflects the diversity of adolescents in the country in terms of ethnicity, language, religion, and other social norms (Boyden et al., 2016; Outes-Leon & Sanchez, 2008; Young Lives, 2018). Despite the data not being nationally representative, the size and high quality of the Young Lives pro-poor sample allows to make robust conclusions about this part of the population (Young Lives, 2017). As such, the pro-poor sampling technique represents a methodological strength.

5.8 ETHICAL CONSIDERATIONS

This study utilised secondary data from Young Lives for which ethical approval was granted by the London School of Hygiene and Tropical Medicine ethics committee through careful checking against ethical standards. In addition, Young Lives received approval from the College of Health Sciences in Ethiopia before each pilot and data collection round. Young Lives further follows ethical guidance of the Department of International Development (University of Oxford), the Association of Social Anthropologists of the Commonwealth and the Save the Children Child Protection Policy (Young Lives, n.d.-b).

One pivotal ethical criterion to the data collection process is informed consent. Young Lives ensured all study participants are informed about the study purpose and subsequently obtained voluntary consent at each round of data collection from all parents and caregivers and children who have the capacity to consent (Morrow, 2013).

In addition, there are ethical considerations for secondary data users. First and foremost, permission needs to be obtained to utilise the data (if permission is not implicitly granted

through open access). To ensure permission, a project request was sent to the UK Data Service which was approved on 19 March 2021. Before asking for permission, the relevance and adequacy of the data for the proposed research question was thoroughly assessed. In addition, anonymity is vital in the data collection process as well as in the use of secondary data. To ensure confidentiality and protection of the study participants, Young Lives data contains no identifying information.

6. RESULTS

The results chapter presents the results from univariate, bivariate, and hierarchical multiple regression analysis. The univariate analyses firstly report frequencies of all categorical variables utilised in this study, followed by mean statistics and standard deviations of all continuous variables. Subsequently, the results from bivariate analyses are presented, starting with correlations of all independent variables with the dependent variable. In addition, a t-test for the dichotomous variable, and analysis of variance for all categorical variables are provided, with self-efficacy as the dependent variable. Lastly, the results of the hierarchical multiple regression models are reported, including assumption checking.

6.1 UNIVARIATE ANALYSES

Descriptive analyses of all variables were conducted to provide an overview of the data (N = 1620). The full descriptive statistics for all categorical variables can be found in Appendix B. The study sample consisted of 836 male adolescents (51.6%) and 784 (48.4%) female adolescents. The majority of adolescents reported good (n = 700, 43.2%) and very good health (n = 691, 42.7%). When asked about their household wealth, most adolescents responded that comfortable best described their household (n = 987, 60.9%). This was followed by 350 (21.6%) adolescents who said they struggle to get by. Only 10.7% (n = 174) reported their household to be very rich or rich, 6.6% (n = 107) described it as poor or destitute, missing n = 2 (0.1%). Of the 1620 adolescents in the sample, 1349 (83.3%) reported taking pride in their work (agree or strongly agree).

Table 2 provides descriptive statistics for all dependent and independent variables. In the study sample, total self-efficacy scores among the adolescents ranged from 18 to 40 with a mean of 30.47 (SD = 3.23). The number of hours spent on family-based work ranged from 0 to 10 hours, with a mean of 4.08 (SD = 1.90). In the sample, the number of hours adolescents spent

in school ranged from 0 to 11 hours, with a mean of 5.80 (*SD* = 1.15). Parent relations had a range from 11 to 32 with a mean of 26.23 (*SD* = 2.77).

Table 2 - Descriptive statistics of the dependent and independent variables

							Skewness		Kurtosis	
	n	Missing	Min	Max	Mean	Std. Deviation	Statistic	Std. Error	Statistic	Std. Error
Self-efficacy	1600	20	18	40	30.47	3.23	-.07	.06	1.37	.12
Working hours	1620	0	0	10	4.08	1.90	-.04	.06	-.67	.12
Hours in school	1620	0	0	11	5.80	1.15	.52	.06	1.86	.12
Parent relations	1591	29	11	32	26.23	2.77	-.18	.06	1.04	.12

6.2 BIVARIATE ANALYSES

6.2.1 PEARSON PRODUCT-MOMENT CORRELATIONS OF INDEPENDENT VARIABLES AND SELF-EFFICACY

Pearson's product-moment correlation coefficient was used to assess the relationships between the dependent variable and the following continuous independent variables: working hours, hours spent in school, and parent relations. According to Cohen (1988), a small correlation is indicated by r values ranging from .10 to .29, medium correlations range from r = .30 to .49, and large correlations range from r = .50 to 1.0.

Out of the three independent variables, working hours did not show a significant correlation, whereas hours in school ($r = -.06$, $n = 1600$, $p < .005$) and parent relations ($r = .46$, $n = 1572$, $p < .001$) were negatively associated with self-efficacy at a statistically significant level. The first correlation between working hours and self-efficacy was very small, with longer hours spent in school associated with lower levels of self-efficacy. The correlation between parent relations and self-efficacy was medium-strong, with higher levels of parent relations associated with higher levels of self-efficacy. See Table 3 for Pearson product-moment correlations of the independent variables and self-efficacy. Pearson product-moment correlation was further used to assess correlations between the independent variables. The results are discussed in the forthcoming section 6.3.1 (see Appendix D for details).

Table 3 - Pearson product-moment correlations between self-efficacy and independent variables

Variable	n	Missing	Pearson Correlation	Sig. (2-tailed)
Working hours	1600	20	-.04	.159
Hours in school	1600	20	-.06*	.013
Parent relations	1572	19	.46**	.000

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

6.2.2 INDEPENDENT SAMPLES T-TEST

Independent samples t-test was used to compare self-efficacy scores across male and female adolescents. The effect size was measured using Cohen's *d*, with .20 representing a small effect, .50 a medium effect, and .80 a large effect (Cohen, 1988).

There was no statistically significant difference in self-efficacy scores for males and females. The mean self-efficacy score for males (M = 30.54, SD = 3.11) differed only slightly from the mean self-efficacy score of females (M = 30.39, SD = 3.36). See Table 4 for the full results.

Table 4 - T-test for self-efficacy scores between male and female adolescents

Variable	n	M (SD)	Mean Diff.	t	df	p	95% CI		Cohen's d
							LL	UL	
Male	825	30.54 (3.11)	.15	.95	1598	.342	-.16	.47	-.05
Female	775	30.39 (3.36)							
Total	1600								

Note. CI = Confidence interval; LL = Lower limit; UL = Upper limit

6.2.3 ONE-WAY BETWEEN-GROUPS ANOVA

One-way between-groups analysis of variance (ANOVA) was used to compare mean scores of self-efficacy between groups of the following variables: subjective health, subjective household wealth, and pride in work. Eta squared (η^2) was used to measure the effect size, with .01 representing a small effect, 0.06 a medium effect, and .14 a large effect (Pallant, 2020).

Subjective health

Levene's test for homogeneity of variances indicated no violation of the assumption of homogeneity of variance ($p > .05$). There was a statistically significant difference in self-efficacy scores for the four groups at the $p < .05$ level: F (3, 1596) = 7.14, $p < .001$. Despite reaching statistical significance, the difference in mean scores between the groups was rather

small. The effect size calculated using eta squared was 0.1. See Table 5 for details. Post-hoc comparisons using Turkey HSD test indicated that the mean self-efficacy score for Group 4 (very good: *M* = 30.86, *SD* = 3.33) was statistically significantly different from that of Group 1 (very poor or poor, *M* = 29.48, *SD* = 2.95) at the .05 level. In other words, adolescents who reported very good health also reported higher self-efficacy scores compared to those reporting very poor or poor health. The same results can be reported for Group 4 (very good) and Group 3 (good: *M* = 30.15, *SD* = 3.05). There was no statistically significant mean difference between Group 2 (average: *M* = 30.42, *SD* = 3.45) and any of the other groups.

Table 5 - One-way between-groups ANOVA for self-efficacy depending on subjective health

Variable	Sum of Squares	df	Mean Square	F	Sig.	η^2
Between groups	221.34	3	117.89	7.14	.000	.01
Within groups	16494.70	1596	10.25			
Total	16716.04	1599				

Subjective household wealth

A one-way between-groups analysis of variance was conducted to compare the effect of subjective household wealth on self-efficacy. Levene's test for homogeneity of variances indicated a violation of the assumption of homogeneity of variance ($p < .05$). A Welch's F test was consulted, and a statistically significant difference in self-efficacy scores for the groups was found at the $p < .05$ level: $F (3, 335.80) = 13.35$, $p < .001$. The calculated effect size of .03 represents a small effect. See Table 6 for details. Because the assumption of homogeneity of variances was violated, Games-Howell post-hoc comparison was conducted, as it does not assume homogeneity of variances (Ruxton & Beauchamp, 2008). Group 1 (very rich or rich, M = 31.34, SD = 3.26) statistically significantly differed from Group 3 (struggle to get by, M = 29.77, SD = 3.59) and Group 4 (poor or destitute, M = 29.51, SD = 2.94). The majority of adolescents perceived their household as comfortable (Group 2). The mean self-efficacy score of that group (comfortable, M = 30.66, SD = 3.06) was also statistically significantly different from Group 3 (struggle to get by) and Group 4 (poor or destitute). There was no statistically significant difference between the subjectively wealthier Groups 1 and 2, or the subjectively poorer Groups 3 and 4. See Appendix C for descriptive statistics of self-efficacy by subjective household wealth.

Pride in work

A one-way between-groups analysis of variance was conducted to compare the effect of adolescents' pride in their work on self-efficacy. Levene's test for homogeneity of variances indicated a violation of the assumption of homogeneity of variance ($p < .05$). A Welch's F test was consulted, and a statistically significant difference in self-efficacy scores for the groups found at the $p < .05$ level: $F (3, 269.14) = 35.18$, $p < .001$. The calculated effect size of .09 represents an intermediate effect. See Table 6 for details. Games-Howell post-hoc test was used to explore differences among the groups. It revealed that Group 4 (strongly agree: M = 32.32, SD = 3.94) statistically significantly differed from all other groups (significant at the .05 level). The largest mean difference (MD = 3.65) was between Group 4 (strongly agree) and Group 1 (strongly disagree or disagree, M = 28.67, SD = 3.89). The only comparison that did not reach statistical significance was between Group 2 (more or less: M = 29.89, SD = 2.72) and Group 3 (agree: M = 30.14, SD = 2.74). See Appendix C for descriptive statistics of self-efficacy by pride in work.

Table 6 - Welch's F test results from one-way between-groups ANOVA for self-efficacy depending on pride in work, and subjective household wealth

Variable	Statistics[a]	df1	df2	Sig.	η^2
Subjective household wealth	13.35	3	335.80	.000	.03
Pride in work	35.18	3	269.14	.000	.09

[a]. Asymptotically F distributed.

6.3 HIRARCHICAL MULTIPLE REGRESSION

As explained in the analysis plan, hierarchical multiple regression was used to examine associations between the three independent variables of this study (working hours, time spent in school and parent relations) and self-efficacy. In a later step, the control variables were included in the model. The categorical control variables (subjective health, subjective household wealth, and pride in work) were recoded into dummy variables. Before conducting multiple regression analysis, the study variables were checked for outliers, multicollinearity, normality, linearity, and homoscedasticity (Tabachnick & Fidell, 2013).

6.3.1 EVALUATION OF ASSUMPTIONS

Outliers

Preliminary analysis revealed twelve outliers (.74%) with standardised residual values of ± 3.3[2] which were removed after careful examination. Mahalanobis distances were obtained as an additional statistical method screening for outliers. Ten cases exceeded the critical value of 16.27,[3] however, the obtained maximum Cook's distance value of .188 indicated that those cases do not have «any undue influence on the results for our model as a whole» (Pallant, 2020, p. 166) . Consequently, the cases were retained.

Multicollinearity

After removing the outliers, the three independent variables were checked for multicollinearity using Pearson's correlation coefficients (see Appendix D for the full results). The assumption was not violated. There was a statistically significant medium negative correlation between working hours and hours spent in school ($r = .39$, $n = 1620$, $p < .001$). However, the correlation was not large enough to cause concern (Tabachnick & Fidell, 2013). The collinearity statistics obtained also did not indicate cause for concern for further multiple regression analysis.

Normality, linearity, and homoscedasticity

The examination of a residual scatterplot is a graphical method to test assumptions of normality, linearity, and homoscedasticity. After removing the outliers, the data points were rectangularly distributed with a concentration of scores along the center, which indicates the assumptions are met (Tabachnick & Fidell, 2013).

6.3.2 MODEL 1 – WORKING HOURS AND SELF-EFFICACY

Model 1 presents a standard linear regression, with one independent variable (working hours) and one dependent variable (self-efficacy). When regressing the dependent variable onto the independent variable, working hours accounted for 0.1% of the variance in self-efficacy scores ($R^2 = .001$), indicating that the linear regression model did not fit the observed data well (Cohen, 1988). In addition, the result was not statistically significant, $F(1, 1558) = 1.98$, $p = 0.160$. This

[2] Tabachnick and Fidell (2013) define cases with standardized residuals in excess of about ± 3.3 as outliers. This guideline has been reproduced, inter alia, by Pallant (2016).
[3] To evaluate Mahalanobis distance values, Tabachnick and Fidell (2013) suggest a critical chi-square value of 16.27 when using three independent variables.

result was consistent with the very small non-significant correlation between total working hours and self-efficacy found in the bivariate analysis. See Table 7 (Model 1) for a full summary of the model.

Table 7 - Model Summary[e] of multiple regression between the independent variables, the control variables, and the dependent variable

					Change Statistics				
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	df1	df2	Sig. F Change
1	.036[a]	.001	.000	3.121	.001	1.98	1	1558	.160
2	.092[b]	.008	.007	3.111	.007	11.32	1	1557	.001
3	.511[c]	.261	.259	2.687	.252	530.86	1	1556	.000
4	.547[d]	.300	.294	2.624	.173	127.37	3	1546	.000

[a]. Predictors: (Constant), Working hours
[b]. Predictors: (Constant), Working hours, hours spent in school
[c]. Predictors: (Constant), Working hours, hours spent in school, parent relations
[d]. Predictors: (Constant), sex, average health, good health, very good health, pride in work – more or less agree, pride in work – agree, pride in work – strongly agree, wealth – comfortable, wealth – struggle to get by, wealth – poor or destitute, working hours, hours spent in school, parent relations
[e]. Dependent variable: Self-efficacy

Table 8 provides the regression coefficients for all models, including unstandardised B and standardised beta[4]. In the first regression model, an increase of one working hour was associated with a decrease of $B = .06$ scores on the self-efficacy scale. The working hours variable did not make a statistically significant unique contribution to the prediction of self-efficacy (*beta* = -.04, p = .160).

[4]The unstandardised B indicates the change in the dependent variable associated with a one unit change in the independent variable when all other independent variables are held constant (Tinsley et al., 2000; Lane, 2013). It gives an indication of the direction and slope of the linear relationship. Because the unstandardised B is given in the metric of the respective independent variable, it is of advantage to use standardised beta coefficients to compare the effects of multiple independent variables measured on different scales. The standardised beta coefficient indicates the unique contribution of each independent variable to the dependent variable, when the variance explained by all other variables in the model is controlled for (Pallant, 2016).

Table 8 – Coefficients[a] of hierarchical multiple regression between the independent variables, the control variables, and the dependent variable

Model		Unstandardised Coefficients		Standard. Coeff.			95% CI	
		B	Std. Error	Beta	t	Sig.	LL	UL
1	(Constant)	30.75	.19		163.91	.000	30.38	31.12
	Working hours	-.06	.04	-.04	-1.41	.160	-.14	.02
2	(Constant)	32.44	.54		60.44	.000	31.39	33.49
	Working hours	-.12	.05	-.07	-2.60	.009	-.21	-.03
	Hours spent in school	-.25	.08	-.09	-3.37	.001	-.40	-.11
3	(Constant)	17.15	.81		21.19	.000	15.56	18.74
	Working hours	-.11	.04	-.07	-2.83	.005	-.19	-.03
	Hours spent in school	-.21	.06	-.08	-3.18	.002	-.33	-.08
	Parent relations	.57	.03	.50	23.04	.000	.52	.62
4	(Constant)	18.74	.95		19.72	.000	18.88	20.61
	Sex	-.23	.14	-.04	-1.70	.089	-.49	.04
	Health[b]							
	Average	.88	.45	.09	1.96	.050	.00	1.75
	Good	.48	.42	.08	1.15	.249	-.34	1.30
	Very good	.84	.42	.13	2.01	.045	.02	1.66
	Wealth[c]							
	Comfortable	-.42	.22	-.07	-1.91	.057	-.85	.01
	Struggle to get by	-1.13	.25	-.15	-4.52	.000	-1.61	-.64
	Poor or destitute	-.61	.33	-.05	-1.83	.067	-1.27	.04
	Pride[d]							
	More or less	.39	.33	.04	1.19	.236	-.26	1.03
	Agree	.37	.26	.06	1.45	.146	-.13	.87
	Strongly agree	1.51	.30	.19	5.11	.000	.93	2.09
	Working hours	-.13	.04	-.08	-3.43	.001	-.21	-.06
	Hours spent in school	-.23	.06	-.08	-3.55	.000	-.35	-.10
	Parent relations	.50	.03	.44	18.65	.000	.45	.55

[a]. Dependent variable: Self-efficacy
[b]. Reference is very poor or poor health
[c]. Reference is very rich or rich
[d]. Reference is strongly disagree or disagree
Note. CI = Confidence interval; LL = Lower limit; UL = Upper limit

6.3.3 MODEL 2 – WORKING HOURS, HOURS SPENT IN SCHOOL AND SELF-EFFICACY

The full model summary for Model 2 can be found in Table 7. Entering the hours spent in school variable accounted for an additional 0.7% of the variance in self-efficacy scores, R^2 Change = .007. Consequently, Model 2 explained 0.8% of the variance in the dependent variable (R^2 = .008), indicating it also did not fit the observed data very well. Despite the model only accounting for a very small variance in self-efficacy scores, hours spent in school statistically significantly improved R^2 at its point of entry, F (1, 1566) = 11.02, p = .001.

As can be seen in Table 8, the unstandardised coefficient of working hours changed from B = -.06 in Model 1 to B = -.12 in Model 2. Hence, the independent variable hours spent in school slightly increased the negative effect of working hours on self-efficacy. While working hours did not make a statistically unique contribution in Model 1, the variable's unique contribution did reach statistical significance at the $p < .05$ level in Model 2 (*beta* = -.07, p = .009). Hours spent in school made a statistically significant unique contribution to the prediction of self-efficacy (*beta* = -.09, p = .001). With every additional hour spent in school self-efficacy scores among adolescents in the sample decreased by B = .25.

6.3.4 MODEL 3 – WORKING HOURS, HOURS SPENT IN SCHOOL, PARENT RELATIONS AND SELF-EFFICACY

Model 3 consisted of working hours, hours spent in school, and parent relations. Altogether, it explained 26.1% of the variance in self-efficacy scores (R^2 = .261). The R^2 value obtained indicates better goodness-of-fit to the observed data compared to the other two models (Cohen, 1988). Entering parent relations into the model explained an additional 25.2% of the variance in the dependent variable (R^2 Change = .252). Model 3 was statistically significant, F (1, 1556) = 530.86, $p < .001$. For the full model summary see Table 7.

After entering parent relations into the regression model, the unstandardised coefficient of working hours and hours spent in school slightly decreased to B = -.11 and B = -.21, respectively. The direction of the relationship remained the same, both variables made a similar small statistically significant contribution to self-efficacy in terms of magnitude ($beta_{work}$ = -.07, p = .005; $beta_{school}$ = -.08, p = .002). Parent relations made the biggest statistically significant unique contribution to the dependent variable, *beta* = .50, $p < .001$, when the variance explained by all other variables in the model was controlled for. According to the unstandardised coefficient, an increase of one score on the parent relations scale is associated

with an increase of B = .57 scores on the self-efficacy scale. All regression coefficients and associated p-values of Model 3 can be found in Table 8.

6.3.5 MODEL 4 – HIERARCHICAL MULTIPLE REGRESSION INCLUDING CONTROL VARIABLES

The control variables sex, subjective health, subjective household wealth, and pride in work were entered in block 1, explaining 12.6% of the variance in self-efficacy (R^2 = .126). After entering the three independent variables in block 2, the total variance explained by Model 4 was 30.0% (R^2 = .300). Consequently, working hours, hours spent in school, and parent relations explained an additional 17.3% of the variance in self-efficacy, after statistically accounting for the control variables, R^2 Change = .173. Model 4 was statistically significant, F (3, 1546) = 127.37, p < .001. The full summary for Model 4 can be found in Table 7. For a summary of the control model see Appendix E.

Of the four control variables, subjective health – very good (*beta* = .13, p = .045), subjective household wealth – struggle to get by (*beta* = -.15, p < .001), and pride in work – strongly agree (*beta* = .19, p < .001) made a statistically significant unique contribution to self-efficacy (reference categories were very poor or poor health, very rich or rich, and strongly disagree or disagree, respectively). Sex did not statistically significantly contribute to the dependent variable, which is in line with the non-significant result found in the independent samples t-test between sex and self-efficacy. The unique contribution of the three independent variables remained statistically significant. Parent relations still made the biggest unique contribution (*beta* = .44, p < .001) to self-efficacy, followed by hours spent in school (*beta* = -.08, p < .001), and working hours (*beta* = -.08, p = .001). Compared to Model 3, which did not statistically account for control variables, the unstandardised negative effect of working hours (B = -.13) and hours spent in school (B = -.23) slightly increased in Model 4. In contrast, the positive effect of parent relations on self-efficacy slightly decreased (B = .50). All coefficients of Model 4 can be found in Table 8. For a summary of the regression coefficients of the control model see Appendix F.

7. DISCUSSION

The overarching objective of this thesis was to explore the relationship between family-based work and self-efficacy among 15-year-old Ethiopian adolescents. In pursuing an ecological approach, hours spent in school and the adolescent-parent-relationship were included as

additional independent variables. Using hierarchical multiple regression analysis, a series of increasingly complex models was built that indicate the explanatory power of working hours, hours spent in school, and parent relations and provide insight into the direction and magnitude of the relationships between the three independent variables and self-efficacy. Using secondary data from Young Lives, the study found evidence that the number of working hours had a significant, yet very small, effect on self-efficacy levels when taking hours spent in school and parent relations into account. While the effects of working hours and hours spent in school on self-efficacy were small, a more substantial association was found between parent relations and self-efficacy levels. The subsequent chapter discusses the results of the analyses in more detail, starting with an evaluation of Ethiopian adolescents' time allocation and their self-efficacy levels. After setting the scene, the results related to the association between working hours and self-efficacy are discussed, followed by a discussion of the impact of hours spent in school and parent relations on the relationship. The last section serves as an overall reflection of the results. Throughout the discussion, the results are related to the established literature and the conceptual framework guiding this thesis. The chapter concludes with an outline and discussion of the key methodological limitations and strengths of this study.

7.1 WORK, SCHOOL AND SELF-EFFICACY AMONG ETHIOPIAN ADOLESCENTS

7.1.1 TIME SPENT WORKING AND TIME SPENT IN SCHOOL

Before discussing the relationship between family-based work and self-efficacy among Ethiopian adolescents in more detail, it is worth taking a look at the results of the univariate analysis presented in section 6.1. Adolescents in the Young Lives sample spent approximately four hours per day working for and within the family, which can be projected to approximately 28 hours per week. The Ethiopian National Child Labour Survey (2018) conducted in 2015 (same year as Round 5 of Young Lives survey) found comparable results on the national level, with 14-17-year-olds who attend school reporting 27.3 weekly working hours. Both numbers exceed the threshold for light work of 14 hours of work per week, which, according to the ILO (2017), implies that work is harmful to the child's health and interferes with their school attendance. Consequently, solely based on the number of working hours, one could expect to find a negative association between family-based work and self-efficacy. At the same time, the working hours reported in the sample on average are more moderate than working hours reported previously, for example by Fekadu et al. (2006) for Ethiopia (eight hours daily) or by

Al-Gamal et al. (2013) for Jordan (33.9 hours per week). This could be explained by these studies' focus on children who engage in paid economic activity, as they usually report longer working hours than children who engage in non-economic activity (Central Statistical Agency of Ethiopia, 2018).

The descriptive statistics further disclose that during a typical day the 15-year-olds in the sample spent a little less than six hours in school (including travelling time). This implies that in terms of time allocation, Ethiopian adolescents spend more time in school than working for and within their family. It is interesting to note that compared to Round 2 of the Young Lives study (conducted in 2006), the mean number of hours spent in school increased by approximately one hour (Orkin, 2012), which could be explained by Ethiopia's expansion of educational services (Central Statistical Agency of Ethiopia, 2018). While in 2005 the federal government requested schools to abolish the shift system and thereby expand the school day from four to five and a half hours (MOE, 2005), the shift system seems to have remained present, especially in rural Ethiopia (Orkin, 2013). It allows schools to teach one group of children in the morning and another group in the afternoon, making school attendance more compatible with work and vice versa (Admassie, 2003; Tafere & Pankhurst, 2015b). To conclude this section, it can be summarised that 15-year-old Ethiopian adolescents in the Young Lives sample spend enough time at work for it to be considered harmful to their development, while at the same time spending long hours in school which could either lessen potential negative effects of work or could enhance them. The relationship between work and school is discussed in more detail in section 7.2.2.

7.1.2 EVALUATION OF SELF-EFFICACY LEVELS

Next to providing insightful information about adolescents' time allocation, the descriptive statistics revealed a mean self-efficacy score of 30.47 among the 15-year-olds. According to Schwarzer (2014), one of the developers of the general self-efficacy scale, there is no cut-off score that determines whether an individual has high or low self-efficacy; consequently no conclusions can be drawn as to whether the mean self-efficacy score obtained from the sample indicates high, moderate, or low levels of general self-efficacy. Consequently, the self-efficacy score itself is of limited informative value when it is not compared either to a control group (e.g., non-working adolescents) or values obtained in former studies. A comparison with the two previously mentioned studies examining efficacy levels of working children would have been interesting but was not possible because either results from univariate analysis were not reported (Feeny et al., 2021) or efficacy was measured with a different instrument (Al-Gamal

et al., 2013). However, an assessment of the mean level of self-efficacy was not the main focus of the present study, but rather understanding how self-efficacy levels vary with work duration.

7.2 EVALUATION OF RESEARCH QUESTIONS

7.2.1 FAMILY-BASED WORK AND ITS ASSOCIATION WITH SELF-EFFICACY

Contrary to expectations, the principal variable of interest, working hours, did not show a significant association with self-efficacy in the bivariate analysis. Beyond the bivariate analysis, no association between the number of hours spent on family-based work and general self-efficacy was found in regression Model 1. This is a surprising finding for several reasons. Firstly, previous literature frequently reports an association between both economic and non-economic activity and psychosocial health among children and adolescents of a similar age as the study sample (e.g. Al-Gamal et al., 2013; Feeny et al., 2021). This discrepancy could be explained by the literature review being subject to publication bias, an issue highlighted by Kuimi et al. (2018) – in their systematic literature review on child labour and its association with health only three out of 78 reviewed articles report a non-significant association. Secondly, the non-significant association was unexpected given that both the established literature and the conceptual framework repeatedly emphasise the importance of work duration (e.g. Al-Gamal et al., 2013; Hesketh et al., 2012; Nuwayhid et al., 2005). Thus, further research is needed to explore the direct association between working hours, whether spent on economic or non-economic activity, and psychosocial health.

While the association between family-based working hours and self-efficacy was not significant in the bivariate analysis and regression Model 1, the association reached statistical significance in all subsequent regression models. This change in significance could indicate a potential interaction effect which is discussed in more detail in section 7.2.5. The results showed a negative direction of the relationship which could be interpreted either in relation to work duration or in relation to the type of work activity. Regarding work duration, the obtained result seems to lend support to the ILO (1999) which suggests excessive work, despite whether it is of economic or non-economic nature, to negatively affect the psychosocial health of children. The suggested threshold for economic activity is 14 hours per week or more, while the threshold for non-economic activity such as household chores is slightly higher at 21 hours per week (ILO, 2017). Following on from these suggested cut-offs, the negative direction of the relationship could be attributed to excessive working hours, as the average number of weekly working hours performed by the adolescent sample exceeds both thresholds. Supportive of this

claim, a study among adolescent domestic workers suggests that working hours of more than 10 hours per day negatively affect psychosocial health (Hesketh et al., 2012). However, beyond this study, there is limited empirical evidence on the unmediated effects of work duration on psychosocial health.

Interpreting the negative effect in relation to the type of work activity is not straightforward. From the obtained result it seems as though psychosocial health risks for 15-year-old adolescents in Ethiopia are amplified through family-based work. While scholars have argued that contributions to the functioning and subsistence of the family can positively impact on the psychosocial health of children (e.g. Libório & Ungar, 2010; Pankhurst et al., 2015), the opposite was observed in this study. Finding potential explanations for this result is difficult mainly because previous literature so far did not assess psychosocial impacts of family-based work. While this gap in the literature justifies the present study, it leaves no possibility for comparison. At the same time, a comparison with previous research on psychosocial impacts of economic and non-economic activity is hampered by the fact that the concept of family-based work as employed in this thesis encompasses both (agricultural work as economic activity and household chores as non-economic activity). To illustrate this further: Among the studies concerned with psychosocial impacts of non-economic activity, researchers have argued that performing household chores or looking after family members could foster a sense of self-worth and thereby benefit children's psychosocial health (Feeny et al., 2021; Trinh, 2020). The negative direction of the relationship between family-based working hours and self-efficacy obtained in this study is not consistent with such claims. However, the studies referred to do not include information about the time spent on non-economic activity, and thus cannot draw conclusion as to whether excessive engagement in non-economic activity beyond the thresholds presented previously might also negatively impact on psychosocial health. Still, it could be argued that the positive effect described by Feeny et al. (2021) and Trinh (2020) is present but overshadowed by the negative impact of agricultural work where children are thought to be disproportionality exposed to hazards (Feeny et al., 2021; ILO, 2011). As a consequence, it must be noted that the present study cannot draw conclusions in terms of the individual effects of the economic and non-economic activities that make up family-based work and whether they might oppose each other.

7.2.2 THE IMPACT OF HOURS SPENT IN SCHOOL

As part of his conceptual framework, Woodhead (2004) argues that schooling can either amplify or attenuate psychosocial impacts of work. The results in the present study seem to

indicate that time spent in school indeed amplifies the negative effects of family-based work on adolescents' general self-efficacy. Thus, the study seems to lend support to researchers who suggest work and schooling to be competitive (e.g. Al-Gamal et al., 2013; Orkin, 2012). In very general terms, Woodhead (2004) characterises this condition as the inability to balance work and school which can put children at risk for adverse psychosocial health, for instance expressed through ineffective coping. While this study did not assess specific aspects that might have led to this competing effect, it is conceivable that irrespective of the activity the overall time strain on adolescents is too high. Arguably, being occupied by work and school approximately ten hours each day leaves little time for leisure and play, which is regarded crucial to a child's cognitive, emotional, and social development (Ginsburg et al., 2007) (see also Convention on the Rights of the Child, 1989, Article 31, where rest, leisure, and play is recognised as a right of every child). Further, it is plausible that in the adolescent sample working hours and school hours interfere with one another due to inflexibility of schools to local work patterns, even where the shift system is in place (see Orkin, 2012; Tafere & Pankhurst, 2015a for detailed mixed methods research on whether children in Ethiopia can combine work and school attendance).

Besides the finding that hours spent in school seem to amplify the negative relationship between family-based working hours and self-efficacy, it was observed that in terms of magnitude the negative effect of hours spent in school was greater than that of working hours. While this result contradicts the common assumption that school is beneficial to the health of the child (see e.g. Hesketh et al., 2012; UNESCO, 2016), it does not necessarily refute it. One potential explanation could be that adolescents value (family-based) work more than they value school as «working signifies the onset of economic activity, and leads to the accumulation of experience and development of abilities necessary for the activities they will perform in the future» (Benvegnú et al., 2005, p. 1423). Consequently, additional hours spent in school might not leave children with a stronger belief in their capabilities. Such value-based reasoning aligns with Woodhead's (2004) argument that psychosocial health impacts of work cannot be separated from values. While this study did not account for it, the negative effect of hours spent in school on self-efficacy could also be explained by high aspirations for educational achievement that cannot be met due to the obligation to participate in family-based work (Boyden et al., 2016). The resulting discrepancy between aspiration and actual performance could negatively affect adolescents' belief in their capabilities.

7.2.3 THE IMPACT OF PARENT RELATIONS

Beyond schooling, Woodhead (2004) suggests the family environment to be a crucial influence for working adolescents' psychosocial health. Irrespective of whether work is performed for the family or for an employer, the adolescents' relationship with their parents is crucial in that it constitutes the main source of social support and thus can have great impact on adolescents' psychosocial health (Kautz et al., 2014; Woodhead, 2004). In this study, the important role of parent relations is even more pronounced given that adolescents perform their work activities for and within the family. To reiterate, Woodhead (2004) argues that parent relations, like schooling, can amplify or attenuate psychosocial impacts of work. In contrast to the impacts of schooling, the results seem to indicate that parent relations attenuate the negative effects of hours spent on family-based work. Arguably, this result could be a sign of reasonable parental expectations in relation to work contributions (Woodhead, 2004) and that «children and their interests are respected by the controlling adults» (Hesketh et al., 2012, p. 776; see also Nuwayhid et al., 2005). Thus, it could be contended that among the adolescent sample the family offers safe working conditions in terms of demand and positive role models which buffer the negative effect of working hours on self-efficacy levels (Feeny et al., 2021; Pankhurst et al., 2015). Similar to the discussion on the role of time spent in school, an interaction between working hours and parent relations might be present (see section 7.2.5 for a reflection on this).

In addition to the finding that parent relations attenuate the negative association between family-based working hours and self-efficacy, the analyses revealed a strong positive association between parent relations and self-efficacy. First and foremost, this result is consistent with previous literature that assigns the family a vital role in forming adolescents' beliefs about their capabilities to shape their destiny (Kautz et al., 2014; Krishnan & Krutikova, 2010; Thomas & Joseph, 2013; Woodhead, 2004). Moreover, considering the results discussed in the previous sections, the result seems to support the finding of Maciel et al. (2013) that family functioning is more important to children's psychosocial health than their working status.

7.2.4 FACTORS ASSOCIATED WITH SELF-EFFICACY IN THE CONTEXT OF WORK

Next to the main results discussed above, the analysis revealed additional interesting results that should be mentioned briefly. In line with previous findings (Alem et al., 2006; Maciel et al., 2013), the study found no significant difference in self-efficacy levels between working boys and girls in the bivariate analysis. Further, sex did not make a unique contribution to self-

efficacy in the regression analysis, indicating that family-based work equally impacts on male and female adolescents. A pro-male bias in self-efficacy among 15-year-old Ethiopians, as found by Dercon and Singh (2013), could not be observed. In contrast to the results of the sex variable, self-efficacy levels significantly differed across the categories of subjective health, subjective household wealth, and pride in work. Above all, the results of the pride in work variable stand out as they point to the importance of subjective meaning attached to work. This finding supports Woodhead's (2004) conceptual reasoning outlined in chapter 2, that work valued by adolescents themselves or their families can promote psychosocial health. Qualitative research methods could be used to further explore this relationship which so far seems to have been neglected in research on psychosocial impacts of work.

7.2.5 OVERALL REFLECTION

According to Woodhead (2004), «[d]emonstrating how work impacts on children's well-being is not straightforward» (p. 328). Both previous literature on psychosocial impacts of work and associated factors as well as the results of the present study underline this statement. Three aspects seem to be decisive for an attempt to shed light on the complex relationship between work and its psychosocial health impacts. Firstly, the literature review has shown that impacts of work are different depending on the type of activity and dimension of psychosocial health explored. Consequently, they need to be assessed separately from one another. Secondly, the direction of the psychosocial health impact seems to be determined by the amount of time adolescents spent on the respective activity, as suggested by the ILO's (2017) thresholds. Finally, as outlined by the conceptual framework, in-depth knowledge of the work activity itself, the environment and the cultural context in which it is performed is required when assessing psychosocial impacts of work. In exploring self-efficacy impacts of family-based working hours through an ecological lens, the present study complied with the aforementioned aspects and thus was able to draw a more nuanced picture of psychosocial health impacts than previous studies have. To summarise, the analyses have shown that working for the functioning and subsistence of the family does not seem to impact largely on Ethiopian adolescents' self-efficacy beliefs, as indicated by the small explained variance found in Model 1 ($R^2 = .001$). Still, a negative and statistically significant association between working hours and self-efficacy was observed. Time spent in school was found to slightly amplify the negative association, while parent relations were discovered to attenuate the negative impacts of family-based work on adolescents' self-efficacy levels. While the effects differ in direction and magnitude, working hours, hours spent in school, and parent relations were able to predict a

significant amount of variance in general self-efficacy levels after differences among adolescents in sex, subjective health, subjective household wealth, and pride in work have been accounted for.

A final note is warranted here on potential interaction effects between work duration, hours spent in school, and parent relations. As discussed in section 7.2.1, there was no significant association between working hours and self-efficacy in the bivariate analysis and regression Model 1. Interestingly, the association reached statistical significance after entering the school variable (Model 2), indicating a potential interaction effect between the two variables. According to Tabachnick and Fidell (2013) an interaction effect is present when the importance of one variable varies over the range of another variable. In other words, so-called moderator variables alter «the direction or strength of the relation between a predictor and an outcome» (Frazier et al., 2004, p. 116). From the change in statistical significance, it could be hypothesized that self-efficacy levels of adolescents performing family-based work are affected differently depending on the number of hours they spent in school. In addition, it is conceivable that an interaction effect between working hours and parent relations might be present where self-efficacy levels of adolescents performing family-based work are affected differently depending on whether they have good or bad relations with their parents. However, due to the limited scope of the thesis no analyses were performed to test whether and to what extent an interaction effect is present.

7.3 METHODOLOGICAL LIMITATIONS

All study results should be interpreted in light of the methodological limitations outlined below.

7.3.1 STUDY DESIGN AND OMMITTED VARIABLES

This study was limited by its cross-sectional design. While the cross-sectional approach made it possible to observe the relationship between work duration and self-efficacy of working adolescents in Ethiopia at a certain point in time, it does not allow for causality to be inferred (Ibrahim et al., 2019; Woodhead, 2004). A cross-sectional study design, however, can ascertain a positive or negative relationship and magnitude of an association which is valuable because it helps to understand the phenomenon of interest (Tinsley et al., 2000). As outlined in the literature review, research on child and adolescent work primarily follows a cross-sectional approach. This study and others could have benefitted from a longitudinal design to provide insight on psychosocial impacts of adolescent work over time (see also Nuwayhid et al., 2005

who suggest that health effects might not show when children have been exposed to work only recently or for a short period of time).

While two ecological factors important to the lives of working adolescents were examined, there are many more that could not be assessed due to the limited scope of this thesis. For instance, when considering additional activities such as school attendance, the influence of peer relations could be interesting to assess. To give another example, when exploring psychosocial impacts of activities that are performed outside the family home, relations with the employer or other responsible adults could help «understand how children […] feel about their work and the place it holds in their personal development» (Woodhead, 2004, p. 335).

7.3.2 GENERALISABILITY

Young Lives' purposive sampling approach limits the generalisability of this thesis' findings, since the study sample is not nationally representative. Because of the pro-poor bias, the results cannot be extended to the whole of Ethiopia (Morrow, 2017). Nevertheless, the sample reflects the diversity of adolescents in the country in terms of ethnicity, language, religion, and other social norms (Boyden et al., 2016, p. 7; Outes-Leon & Sanchez, 2008; Young Lives, 2018) and consequently can draw robust conclusions about this part of the population (Young Lives, 2017).

7.3.3 SOCIAL DESIRABILITY AND TIME ALLOCATION BIAS

Largely, data on children's and adolescents' well-being is self-reported and therefore potentially biased by social desirability. Social desirability bias describes an error «which is introduced by children's tendency to provide socially desirable answers when asked about sensitive topics or behavior» (Camerini & Schulz, 2017, p. 1170). While some scholars argue that data obtained from adolescents is reliable (Fekadu et al., 2006), others have pointed towards potential over-reporting of "good" behaviours and states (Camerini & Schulz, 2017). It is plausible that the latter applies to the reporting of self-efficacy levels and parent relations in the Young Lives sample. It is further conceivable that the reported number of hours spent at work or in school are influenced by the value and subjective meaning attached by the responding adolescent to each activity. In addition to a social desirability bias, there might be reporting bias in the number of working hours due to seasonally higher or lower demand for certain activities. Boyden et al. (2016) suggests that a realistic assessment of time allocation is difficult as there is seasonal variation in some of the activities undertaken by adolescents, for example farm

work. Further, focusing on work undertaken on a "typical day" is likely to result in underestimation of adolescent's work (Boyden et al., 2016; see also Dillon, 2010).

7.4 CONTRIBUTIONS AND STRENGTHS OF THE STUDY

Despite its methodological limitations, the thesis makes important empirical and conceptual contributions, and can further report methodological strengths. Firstly, there is a limited number of studies concerned with impacts of family-based work, as revealed in the literature review. In addition, very few studies explore self-efficacy levels in relation to adolescent work and its duration, even though it arguably is a key skill to those likely to face many challenges and adverse situations throughout their life course. Thus, this study makes two central contributions to the advancement of empirical health promotion knowledge; it adds to the body of literature that explores the association between activity-specific work duration and psychosocial health impacts, and further provides insight on a psychosocial skill under-researched in the context of adolescent work. The relevance of the empirical contributions is amplified when considering adolescents represent such a large group of the population in Ethiopia.

From a conceptual viewpoint, the study has illustrated the importance of adopting an ecological approach when assessing psychosocial health impacts of adolescent work. The results reported in the previous chapter have shown that the two contextual factors under analysis had a more substantial association with adolescents' self-efficacy levels than the number of family-based working hours. Moreover, the contextual factors seemed to mediate the negative effects of work duration. These findings support the key assumption of the conceptual framework that the context in which work is performed plays a far-reaching role in determining the psychosocial impacts of the activity itself. At the same time, the study points towards the need for conceptual advancement regarding a common approach to assessing psychosocial health impacts of work.

Finally, the use of an established instrument, namely the self-efficacy scale, is a methodological strength of the study. While psychosocial constructs cannot be observed directly and hence cannot be measured directly (Yorke & Portela, 2018), Schwarzer and Jerusalem (1995) were able to develop a scale that has proven to measure general self-efficacy reliably across country-contexts (Scholz et al., 2002). In addition, the scale was developed specifically for adolescents (Schwarzer & Jerusalem, 1995).

8. IMPLICATIONS AND CONCLUSION

8.1 IMPLICATIONS FOR RESEARCH AND PRACTICE

A number of implications for future research and policy interventions can be drawn from the study. Firstly, this study has clearly illustrated the importance of exploring factors that contribute to psychosocial skill development of adolescents given they promote sustained health and facilitate success in later life. On that note, the focus of future research inquiries should be on strengths and positive outcomes, rather than psychopathology. Secondly, longitudinal research on the topic could expand the findings of the predominantly cross-sectional studies to trace long-term psychosocial health impacts. Moreover, special focus should be granted to self-efficacy as a dependent variable, while also emphasising psychosocial health impacts of work performed for and within the family. To expand on the results of this study, quantitative research evaluating economic and non-economic family-based work activity separately could inform about their individual psychosocial health effects and how they might interrelate. In connection to this, work duration which up to this point has been a neglected work characteristic in empirical studies, deserves special attention assuming it plays a key role in determining psychosocial health impacts of work. Finally, this thesis has on multiple occasions highlighted the significance of embedding health promotion research inquiries in an ecological approach as it can facilitate a more comprehensive understanding of psychosocial health impacts of work. Beyond hours spent in school and parent relations, the results have shown pride in work to be an important contextual factor. Further investigation into the role of values attached to different work activities on the individual-, community-, and country-level can ensure a more holistic understanding of psychosocial health impacts of work.

Implications for practice were drawn mindful of the fact that «[j]udgements made by an observer about possible risks or benefits of work may not coincide with how children receive those influences» (Woodhead, 2004, p. 327). The subsequently outlined recommendations for policy interventions thus should be recognised with caution. The study results have shown that for Ethiopian adolescents, time spent at work and time spent at school seem to compete causing a decline in their self-efficacy beliefs. A first step to avert such developments could be to acknowledge that work for many adolescents is an economic necessity, and beyond that a potential source for the development of skills required in later life for entry into the labour force. In doing so, future policies may address how flexibility in work and school schedules could be increased so adolescents can benefit from both activities in terms of psychosocial skill development. Moreover, the observed importance of parent relations may be translated into

policy by designing interventions for capacity-building among parents to strengthen adolescents' support systems. Finally, policy efforts to promote adolescent psychosocial health should be guided by a coordinated cross-sectoral approach as demanded in the Ottawa Charter (World Health Organization, 1986).

8.2 CONCLUSION

The overarching objective of this thesis was to explore the relationship between family-based work and general self-efficacy among 15-year-old adolescents in Ethiopia. The specific research questions addressed were to what extent family-based working hours are associated with general self-efficacy levels, and to what extent this association changes when taking hours spent in school and parent relations into account. In addition, a third research question asked whether family-based working hours, hours spent in school and parent relations were able to predict a significant amount of variance in general self-efficacy levels, after statistically accounting for differences in sex, subjective health, subjective household wealth, and pride in work. The number of hours spent in school and parent relations were selected as part of the conceptual framework that highlights the need of an ecological approach for assessing adolescents' psychosocial health. The analyses conducted on secondary data from Young Lives showed that hours spent on family-based work only explained a small amount of variance in general self-efficacy levels. This indicates that working for the functioning and subsistence of the family does not impact largely on Ethiopian adolescents' belief about their capabilities to shape their destiny. Still, a negative and statistically significant association was found, which could be explained by the excessive number of working hours. Time spent at school was found to amplify the negative association, most likely due to the competing nature of work performance and school attendance. At the same time, it was observed that parent relations attenuate the negative impacts of family-based work on general self-efficacy levels, speaking to the argument that the family plays a key role in the development of adolescents' psychosocial skills.

To conclude this thesis, attention should be drawn one last time to the contextual and cultural relativism of adolescent work. In light of previous knowledge, it does seem as though the extent to which work is harmful to the psychosocial health and development of adolescents is activity- and context-specific, and subject to cultural interpretation. Thus, scholars and policy makers should be careful to avoid prejudgements of work as detrimental to health to assure that future efforts in research and practice will translate meaningfully to adolescents' work.

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APPENDICES

Appendix A - Items included in psychosocial scales

Scale	Items
Self-efficacy	1. I can always manage to solve difficult problems if I try hard enough 2. If someone opposes me, I can find the means and ways to get what I want 3. It is easy for me to stick to my aims and accomplish my goals 4. I am confident that I would deal efficiently with unexpected events 5. Thanks to my resourcefulness, I know how to handle unforeseen situations 6. I can solve most problems if I invest the necessary effort 7. I can remain calm when facing difficulties because I can rely on my coping abilities 8. When I am confronted with a problem, I can usually find several solutions 9. If I am in trouble, I can usually think of a solution 10. I can usually handle whatever comes my way
Parent relations	1. My parents understand me 2. I like my parents 3. My parents like me 4. If I have children of my own, I want to bring them up like my parents raised me 5. My parents and I spend a lot of time together 6. My parents are easy to talk to 7. I get along well with my parents 8. My parents and I have a lot of fun together

Appendix B - Frequencies of categorical variables

	Frequency	Percent (Valid Percent)
Sex		
Male	836	51.6 (51.6)
Female	784	48.4 (48.4)
Total	1620	100.0
Subjective health		
Very poor or poor	44	2.7 (2.7)
Average	185	11.4 (11.4)
Good	700	43.2 (43.2)
Very good	691	42.7 (42.7)
Total	1620	100.0
Subjective household wealth		
Very rich or rich	174	10.7 (10.8)
Comfortable	987	60.9 (61.0)
Struggle to get by	350	21.6 (21.6)
Poor or destitute	107	6.6 (6.6)
Total	1618 (missing n = 2)	99.9 (.1)
Pride in work		
Strongly disagree or disagree	92	5.7 (5.8)
More or less	143	8.8 (9.0)
Agree	1028	63.5 (64.9)
Strongly agree	321	19.8 (20.3)
Total	1584 (missing n = 36)	97.8 (2.2)

Appendix C - Descriptive statistics of one-way-between-groups ANOVA for self-efficacy by categorical variable

Variable	n	M	SD	SE	95% CI		Min	Max
					LL	UL		
Subjective health								
Very poor or poor	44	29.47	2.95	.44	28.58	30.37	22	40
Average	182	30.42	3.45	.26	29.92	30.93	19	40
Good	691	30.15	3.05	.12	29.92	30.37	19	40
Very good	683	30.86	3.33	.13	30.61	21.11	18	40
Total	1600	30.47	3.23	.08	30.31	30.62	18	40
Subjective household wealth								
Very rich or rich	172	31.34	3.26	.25	30.85	31.83	18	40
Comfortable	976	30.66	3.06	.10	30.46	30.85	19	40
Struggle to get by	344	29.77	3.59	.19	29.39	30.15	19	40
Poor or destitute	107	29.51	2.94	.28	38.95	30.08	20	36
Total	1599	30.46	3.23	.08	30.31	30.62	18	40
Pride in work								
Strongly disagree or disagree	91	28.67	3.89	.41	27.86	29.48	19	40
More or less	143	29.89	2.72	.23	29.44	30.34	21	39
Agree	1020	30.14	2.74	.09	29.97	30.30	19	40
Strongly agree	315	32.32	3.94	.22	31.89	32.76	18	40
Total	1569	30.48	3.24	.08	30.31	30.63	18	40

Appendix D - Pearson product-moment correlation coefficients for total working hours, hours spent in school, and parent relations

Variable	1	2	3
(1) Total working hours	1		
(2) Hours in school	-.39**	1	
(3) Parent relations	.01	-.03	1

**. Correlation is significant at the 0.01 level (2-tailed)

Appendix E - Model Summary[c] of multiple regression between total working hours, hours spent in school, parent relations and self-efficacy while controlling for control variables

					Change Statistics				
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	df1	df2	Sig. F Change
Control	.356[a]	.126	.121	2.928	.126	22.43	10	1549	.000
4	.547[b]	.300	.294	2.624	.173	127.37	3	1546	.000

[a]. Predictors: (Constant), sex, average health, good health, very good health, pride in work – more or less agree, pride in work – agree, pride in work – strongly agree, wealth – comfortable, wealth – struggle to get by, wealth – poor or destitute

[b]. Predictors: (Constant), sex, average health, good health, very good health, pride in work – more or less agree, pride in work – agree, pride in work – strongly agree, wealth – comfortable, wealth – struggle to get by, wealth – poor or destitute, total working hours, hours spent in school, parent relations

[c]. Dependent variable: Self-efficacy

Appendix F – Coefficients[a] of hierarchical multiple regression between the independent variables and self-efficacy after statistically controlling for sex, subjective health, pride in work, and subjective wealth

Model		Unstandardised Coefficients		Std. Coeff.			95% CI	
		B	Std. Error	Beta	t	Sig.	LL	UL
Control	(Constant)	29.63	.56		53.22	.000	28.54	30.72
	Sex	-.18	.15	-.03	-1.23	.221	-.48	.11
	Health[b]							
	Average	.85	.50	.09	1.67	.098	-.13	1.84
	Good	.46	.47	.07	.99	.323	-.45	1.37
	Very good	1.01	.47	.16	2.17	.030	.10	1.93
	Wealth[c]							
	Comfortable	-.65	.25	-.10	-2.65	.008	-1.13	-.17
	Struggle to get by	-1.44	.28	-.19	-5.20	.000	-1.98	-.89
	Poor or destitute	1.58	.37	-.13	-4.30	.000	-2.30	-.86
	Pride[d]							
	More or less	.48	.37	.04	1.30	.193	-.24	1.19
	Agree	.70	.28	.11	2.46	.014	.14	1.25
	Strongly agree	2.87	.32	.37	9.10	.000	2.25	3.49
4	(Constant)	18.74	.95		19.72	.000	18.88	20.61
	Sex	-.23	.14	-.04	-1.70	.089	-.49	.04
	Health[b]							
	Average	.88	.45	.09	1.96	.050	.00	1.75
	Good	.48	.42	.08	1.15	.249	-.34	1.30
	Very good	.84	.42	.13	2.01	.045	.02	1.66
	Wealth[c]							
	Comfortable	-.42	.22	-.07	-1.91	.057	-.85	.01
	Struggle to get by	-1.13	.25	-.15	-4.52	.000	-1.61	-.64
	Poor or destitute	-.61	.33	-.05	-1.83	.067	-1.27	.04
	Pride[d]							
	More or less	.39	.33	.04	1.19	.236	-.26	1.03
	Agree	.37	.26	.06	1.45	.146	-.13	.87
	Strongly agree	1.51	.30	.19	5.11	.000	.93	2.09
	Total working hours	-.13	.04	-.08	-3.43	.001	-.21	-.06
	Hours spent in school	-.23	.06	-.08	-3.55	.000	-.35	-.10
	Parent relations	.50	.03	.44	18.65	.000	.45	.55

[a]. Dependent variable: Self-efficacy
[b]. Reference is very poor or poor
[c]. Reference is very rich or rich
[d]. Reference is strongly disagree or disagree