ADVANCING EDUCATION IN MUSLIM SOCIETIES

MAPPING THE TERRAIN REPORT

2018-2019

INTERNATIONAL INSTITUTE OF ISLAMIC THOUGHT

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This study was approved by the Institutional Review Board (IRB) of Indiana University, Indiana.

INTERNATIONAL INSTITUTE OF ISLAMIC THOUGHT

The International Institute of Islamic Thought (IIIT) is the premier international organization focusing on providing a platform for the unique perspective of Muslim thinkers, scholars and practitioners in the humanities and social sciences. For almost 40 years, IIIT has been a voice for moderation, diversity and renewal in Islamic thought, with an emphasis on concepts such as co-existence and building the capacity of communities to address their common global and local challenges. Today, IIIT is the voice of the Muslim intellectual tradition in the west, and a champion for scholarship, knowledge and learning in Muslim societies across the world.

IIIT was established in 1981 as a U.S. non-profit 501(c) (3) non-denominational organization. Its headquarters are in Herndon, Virginia, in the suburbs of Washington, D.C.

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EXECUTIVE SUMMARY

This report is based on a study that is part of the initiative on Advancing Education in Muslim Societies (AEMS). It shares the results of the first annual empirical research on "Mapping the Terrain" of education in Muslim societies. The study emerged in order to, first, carry the legacy of IIITs intellectual work in education and, second, address the gaps in knowledge on values-based education as part of the human development approach. The long-term goal is to contribute to the knowledge of human civilizations and how they can imagine a future of prosperity, justice, and peace. This goal is accomplished through conducting evidence-based research and generating new knowledge on the state of universal Qur'anic values and ways in which they influence the path of human development and states of consciousness in Muslim societies. The results of the study will be available for the use of researchers, policy makers, education change agents, and others.

This study is unique in its approach and scope, as it includes more than 25,000 participants and covers 13 countries and one republic within a country. With its focus on schools, universities, and the stakeholders around them, this initiative elevates human development through education as a goal in itself and as a method of achieving the goal of peaceful living for humanity. It also brings the voices of youths and young adults to the forefront of the education reform agenda. This is of particular importance as the next generations in many Muslim societies are responding to the current geopolitical conditions with resistance and resilience with no authentic assessment of their struggles and ways to ensure their futures beyond employment and citizenship. The goal of the human development is to reach the states of higher consciousness and live according to values shared by all people.

A thorough examination of the literature and the universal Qur'anic values led to the selection of constructs such as empathy, forgiveness, and moral reasoning, among others. These values resonate with Muslims and non-Muslims alike and are central to human development and well-being. Questions remain about how youths perceive these values and how adults infuse them and reason around them when challenged by everyday adversities and economic hardships. The annual nature of this study will provide a space for dialogue and intellectual debates on aspects of education and human development that have practical implications for policy, assessment and pedagogy. The wide distribution of the study results and the availability of the data sets will certainly encourage these conversations.

A thorough selection process of the study methods, design, and conceptual framework conducted by the research team – whose members have a diversity of expertise and academic preparation – ensured that all the study's components were conducted with sensitivity to local conditions and ensured the selection of existing instruments that are reliable and valid in international contexts. The collaborations with local research teams in each location also ensured input from researchers in each country. The results of the analysis of this large-scale quantitative study suggest complex yet extremely important lessons on the values selected and their importance. The results also provide lessons on

the research methods used and their success and challenges. This report also shares the conceptualizing of the study, especially its human development approach and the results of the first annual data collection of Mapping the Terrain.

When placing forgiveness and community mindedness as outcome variables and empathy and moral reasoning as predictors of participants' scores on those among individuals in the study, we are assuming the high possibility of confirming that and especially the positive direction of the predictions in the model. This equation is further enhanced by three additional variables that are suggested to promote the outcomes religiosity, sense of belonging, and sense of self-efficacy. The results of the study confirm the model and the power of empathy (more than moral reasoning) to enhance the tendencies to forgive and become more community minded as part of the collective in Muslim societies. Demographic variables among the various target groups (students in K-12 and higher education, teachers, administrators, and parents) such as gender and education did not play significant roles in determining the results of the study.

1. INTRODUCTION

Background

Advancing Education in Muslim Societies (AEMS) is part of a larger effort to reform education in Muslim societies and in many of the world's communities, especially in the Global South or what international agencies call "lower income countries" (Adamson, Astrand, & Darling-Hammond, 2016). AEMS is an aspiration and a long-term goal of the International Institute of Islamic Thought (IIIT). It responds to the immediate need to reform education systems in Muslim societies as part of the global reform effort that goes against the current approach to education as an "ideological package" of reform ideas (Carnoy & Rhoten, 2002). This includes, for example, the so-called Global Education Reform Movement (GERM) of privatization, standardized testing, accountability, and school choice. GERM's rationale is based on economic investments in the private and corporate sectors of education, and the resulting reforms are typically driven by top-down policies and imports from developed countries (Adamson et al., 2016). For example, Chile imported the neoliberal (free market) model of education developed in the United States to improve education through competition and school choice (Castro-Hidalgo & Gomez-Alvarez, 2016). Such scenarios, however, have often been criticized for how school choice disproportionately benefits wealthier communities, as opposed to those living in poverty.

A closer historical examination of reform efforts specific to Muslim societies is an important component beyond the scope of this report, but it is important to acknowledge the contributions of many Muslim scholars, such as those in Egypt and other countries who called for reform of education in general and Islamic education in particular (Gesink, 2006). The further examination of the impact of GERM on Muslim societies and how international aid is determined is also an important component to provide the historical, geopolitical, and social contexts of reform efforts, but lies beyond the scope of this report.

More specifically to the organization and its limited efforts to contribute to reform, IIIT has been both an agent to achieve the reform objectives and a leading academic and research institution charged with renewing Islamic thought through reforming education and integrating Islamic knowledge into the social sciences. Two years ago, IIIT made an intentional refocus on AEMS as a core framework that guides the theoretical, empirical, and organizational aspects of the institute. The initiative closes the circle of more than 30 years of theoretical work to the applied research, and thereby shares the knowledge widely and acquires a voice in the discussion on reform initiatives. AEMS comes as a "theoretical discourse as well as to generate data-driven research that represents the highest levels of intellectual integrity" (Alwani & Nasser, 2019, p. 30). Mapping the Terrain as an annual study is designed to further the AEMS empirical research agenda.

Rationale

Reform of education in its broadest sense requires forces coming together to improve education systems as well as policies and leadership. It also necessitates long-term planning and flexible designs including the involvement of multiple stakeholders to impact policies, curriculum, and teaching practices. With full awareness of the enormous tasks that a reform agenda entails, the empirical

framework of AEMS offers a way to contribute to the advancement of education in Muslim societies and beyond. The initiative views education as a platform for addressing the status quo of education spaces and the larger geopolitical environments to explore ways in which education can play a role in infusing values and empowering individuals and groups to pursue those as part of their personal development.

Obviously, to be effective, this approach requires grounding in local theories and perspectives, especially considering how data-driven and evidence-based recommendations and policies may contribute to comprehensive reform efforts implemented by governments and education systems in Muslim societies and elsewhere (Alnahdi, 2014). Ultimately, Mapping the Terrain will produce new empirical data intended to advance education in Muslim societies and contribute to the scholarly body of work in these areas. By widely sharing the results of the annual study and the data sets of Mapping the Terrain, AEMS encourages further research and the generation of field-based recommendations for the implementation of sound and appropriate practices and policies.

While leading educational research and interventions emphasize education for employment and citizenship development, this initiative argues for a broader and more values-based approach to cognitive, emotional, and spiritual development. Further, although the empirical study of the initiative is not primarily interested in academic performance, the values and constructs included are related (directly or indirectly) to achievement. The weight given to the emotional, cognitive, and spiritual aspects of human development will in turn generate new information and address gaps in empirical knowledge that will indirectly influence academic achievement (Rothon, Goodwin, & Stansfield, 2012). Each value that is investigated is key to the overall development of the individual and community.

A review of a major study examining programs in 231 schools that implemented socio-emotional focused programs – mostly in Western contexts – suggested that socio-emotional aspects contributed to students' prosocial behaviors as well as attitudes toward schooling (Durlack, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Despite its importance, this area of research is lacking in Muslim societies. Diekstra (2008) points out that a majority of studies examining the effectiveness of school-based social and emotional learning programs have been conducted in the United States, and the rest have mostly been conducted in Canada or Australia.

The Mapping the Terrain annual study is the vehicle to address this gap in research in Muslim societies and to achieve the empirical research objectives of AEMS. It serves as a hub for information on education-related topics, especially those related to the "learning to be" concept identified and articulated by UNESCO as one of the four pillars of education, along with learning to do, learning to know, and learning to live together. (UNESCO, 1996). The "learning to be" approach is at the center of this initiative – specifically, the way that approach encompasses values as part of the educational process. The study explores constructs that align with basic universal values and ways in which they manifest as part of a growth and development trajectory. It is designed to learn more about the aspects of personal and community development among participants in both the school systems (whether formal or informal) and in higher education institutions to achieve the long-term goals of human understanding and peaceful coexistence.

The study was launched in 2018 to emphasize the importance of evidence-based generation of knowledge on values. It started with a pilot of four constructs: empathy, forgiveness, moral reasoning, and community mindedness. These measurable constructs are selected because they are grounded in a universal value system that is important in the lives and development of humanity. In addition, several other constructs were hypothesized to act as predictors (although they are not necessarily considered as values): sense of belonging, self-efficacy, and religiosity. Administered in 13 countries and one republic within a country (see country/site list in Appendix A) among secondary education students, their parents, teachers, and administrators as well as university students, the study is indeed goal oriented and complex. It also has the potential to inform researchers and decision makers in Muslim contexts and beyond.

The above constructs are foundational to many others that are instrumental for success in life and in schooling. Since the AEMS initiative is interested in progress along the human development trajectory as a way to achieve the goals of human prosperity and peaceful living, aligning the empirical research agenda of AEMS with a values-based framework is unique to this study. Based on that premise, Mapping the Terrain explores critical and neglected aspects of advancing education in its broadest sense to benefit Muslim societies by providing new and authentic knowledge that will inform the areas of pedagogy, policy, and curriculum. The empirical research approach at the heart of this initiative will ultimately produce recommendations for new strategies on engaging the cognitive, emotional, and behavioral aspects of development that will contribute to human civilization in meaningful ways. Our reliance on the local voices in so many countries and the investment in authentic research skill development makes this study unique and an important contribution to scholarship in education reform.

Finally, the initiative will contribute to reform efforts in Muslim societies, especially in educational thinking that is authentic and culturally appropriate. In contexts such as Muslim societies of today, where state and religion are intertwined, a thorough and a sensitive approach is critical. For example, schooling typically includes Islamic Studies as a distinct subject within or as an integrated part of school curriculum. That makes spiritual and religious thinking critical to understanding local communities and what they deem important to a meaningful life (Nasser, Miller-Idriss & Alwani, 2018). Thus, it is critical to equip Muslim youths with tools and skills to respond to modern pressures. This study contributes to that by providing an annual data bank on the perceptions and views of these youths, among others, on values that are important to their faith and religious upbringing as well as to their lives as citizens of the world and of the 21st century.

Goals of the AEMS Initiative

The AEMS initiative attempts to achieve the following:

- Contribute to the Integration of Knowledge (IOK) intellectual discourse and its interface with academic disciplines in Muslim societies' educational systems. The initial interface with academic disciplines and educational systems will be through the adoption of the "Universal Qur'anic Values" approach.
- Provide evidence-based knowledge on advancing education in Muslim societies. Eventually, it will be expanded into other possible ways to interface IOK's theoretical framework with the empirical aspects of AEMS.
- Recommend policies that engage governments, non-governmental organizations and universities, among others, on ways to transform education systems and advance people's well-being so they can participate proactively in building their societies and a civilization of peace and prosperity for all.
- Advocate for a developmental approach that is relevant to Muslim youths, schools, universities, families, and communities at large.
- Contribute to preparing a new generation of Muslim intellectuals, educators and academics for research and teaching careers engaged with AEMS's major initiatives.
- Forge a universal intellectual discourse on the IOK and its "Universal Qur'anic Values" as a paradigm (Alwani & Nasser, 2019, p. 32).

2. CONCEPTUAL FRAMEWORK

The Human Development Approach

The developmental approach that this study is based on provides the most flexible and longitudinal framework for growth and change, especially considering the social, cultural, and political variations in Muslim societies. It also focuses on the "richness of human lives rather than on simply the richness of economies" (Jahan, 2016, p. 2). The human development approach presents education as a positive influence during growth and a potential factor in the cognitive, moral, and socio-emotional domains of personal development. Adopting the human development approach suggests the possibility of reversing the "damage" done in fragile conditions (Committee on Integrating the Science of Early Childhood Development, 2000) and moves the conversation away from the deficit model and toward an asset-based approach to education. Furthermore, in the design of Mapping the Terrain, we aim to refine the human development approach selected and its application in Muslim societies to create a more culturally relevant developmental trajectory.

The human development approach provides a unique framework for spiritual, values-based, and intrapersonal growth for Muslim youths and communities as part of a larger movement toward human understanding and prosperity. This study applies a comprehensive human development theory where values play an instrumental role in improving human lives. A review of the human development classical literature shows that theorists such as Piaget and Inhelder (1969) and Erikson (1959) suggested the person goes through universal developmental stages from infancy to adulthood highlighting the importance of physical maturity and the environment in growth at various rates. Also, prominent moral development theorists such as Kohlberg (1984), Gilligan (1993), Maslow (1943, 1954), and Kegan (1982), highlight a linear progression from the basic stages of existence to the higher ones through maturation. For example, Kohlberg's moral development theory suggested a growth process from a simple right and wrong stage of reasoning about morals to a more complex and sophisticated stage of high moral and humanistic values (1984).

However, none of these theories specifically address the possibilities and variations in human growth as species in a larger context (Beck & Cowan, 2006), and few highlight the possibility of moving back and forth on the developmental trajectory (Erikson's theory may be one of the few, but it differs in its emphasis on regression as a result of not resolving developmental dilemmas). Kohlberg, for example, identified one of the stages of moral development as "postconventional morality," in which the person sees order as a contract between people and a way to protect individual rights (Kohlberg, 1984). This stage is followed by the highest stage, which Kohlberg (1984) named "universal ethical principles," an ideal stage that is reached when people adhere to a few abstract and universal principles such as equality and respect for human dignity. Few people – if any – can reach this stage.

Kegan (1982), on the other hand, presents a stage-like progression of development based on Piaget's theory of cognitive development (1977), where the person moves to the highest stage of psychological maturity of the mind that he calls the "self-transforming mind." Again, few can reach this highest stage. Furthermore, in the classical theories of Maslow (1943, 1954), Kohlberg (1984), and Kegan (1982), the highest stages are very hard to achieve and therefore primarily aspirational. This view makes it impossible for people to believe in these higher moral stages.

Critics of the moral development stages of Kohlberg – particularly Gilligan and her stages (1993) – strive for a level Gilligan calls the "morality of nonviolence," a heightened understanding of choice between one's own needs and care for others. She appropriately calls this approach the "ethics of care," a theory developed in response to Kohlberg's theory of moral development (Gilligan, 1993). Further, Fowler (1991) who contributed a stage theory on faith development based on Christian theological perspective, identifies developmental stages that become vague and hard to achieve as a person moves up the developmental pathways. All the above-mentioned theories contend that the person cannot reach the highest stages even though the theorists deem them critical for moral development and growth.

Spiral Dynamics and Values

To move away from a stage-like and linear progression of growth and to highlight the complexities of development within established human value systems, an extensive review of the literature led to the Spiral Dynamics model of intrapersonal development (Beck & Cowan, 1996, 2006) as a framework representing the developmental trajectory of human values. This model also offers states that are achievable and not permanent. The dynamic nature of the model and the ways it illustrates the changing developmental pathways involved in the various states of consciousness appealed to and seemed appropriate for an initiative in Muslim societies with various cultural, social, and political environments. In this model, individual growth is determined by age early in life and by life circumstances later. It is a complex model that is based on many years of work by several key researchers (Beck & Cowan, 1996, 2006). According to Lessem (2018), "It's the first major, systematic, conceptual system, and complex way of thinking about everything that addresses the big picture" (p. xiii). The model claims to offer the code to humanity because of its examination of human existence going back to the early evolution of people and placing humanity on a developmental trajectory that requires a re-examination of the states of consciousness as we all go through them (as individuals and groups) in ways that encompass values such empathy, compassion, and social and economic justice (Beck & Cowan, 2006).

The Spiral Dynamics model highlights states of consciousness instead of stages because states represent temporary conditions, while stages are developmentally permanent periods decided by maturation in many of the theories. Stage theories begin in infancy, and some claim the stages are universal. The Spiral Dynamics model is flexible and contextual in its emphasis on life conditions (Wilber, 2007). Beck and Cowan (Beck & Cowan, 1996, 2006) attribute the Spiral Dynamics model to the work of Graves (1970), who observed how people behave and think in different ways about virtually everything in life. According to Beck and Cowan: "Spirals are alive, magical, powerful, and multidimensional. Spirals reflect thought in a way that is open-ended, continuous, and dynamic" (Beck & Cowan, 2006, p. 26). Beck, Teddy, Solonin, Viljoen, and Johns (2018) reiterate this when they state: "Our history is one of regeneration as we time and time again tackle challenges and create new ways of living and thinking to solve these challenges" (p. xviii).

Among the few recent large-scale empirical studies examining the Spiral Dynamics model, Stambolovic's (Stambolovic, 2002) analysis conducted in Serbia/Yugoslavia suggests that each level of psychosocial existence develops in response to those life conditions that are formative for cultures and/or countries. Stambolovic asserts, "Cultures/countries are formed around a specific centre of gravity (determined by a specific level of existence) that determines boundaries of optimal behavior, thinking and even perception. To understand the processes in a certain community it is necessary to discover the centre of gravity" (Stambolovic, 2002, p. 60).

Based on this understanding, we suggest that in many (but not all) Muslim societies, spiritual and religious thinking are core to developmental values-based education, and this must be acknowledged as part of any educational research agenda in these contexts. Thus, even though Beck and Cowan's

model proposes eight different states of consciousness and growth from the instinctive to the state of worldly (as shown in Figure 1 below), we have adapted this model, so it represents three distinct but flexible and fluid levels and clusters. Each level contains three states, including an additional ninth state, *tawḥīd* (Oneness of God), as an integrated and higher state of consciousness that is essential for understanding ways of thinking and reasoning in Muslim societies. The model also has room for adaptation across cultures and contexts and in a recent publication is used in an attempt to describe the model's understanding of major conflicts in the 20th century, such as the Apartheid era and the Palestinian-Israeli conflict (Beck et al., 2018). Its fluidity enables us to consider the most important aspects of the Islamic faith and articulate it as part of the developmental trajectory. *Tawḥīd* , as one of the most foundational beliefs in Islam, has a space on the Spiral Dynamics model because, in our view, it is the highest state of consciousness in the developmental model. For someone to reach this state of being means that he or she sees it as an inclusive state of consciousness which includes the previous states (see Table 1 below) from the egocentric, to the ethnocentric, and worldly, ultimately moving the human existence to the state of coexistence with everything in the universe as distinct from the existence of the Almighty.

The Spiral Dynamics states of consciousness are developmental and have certain characteristics. The table below (Table 1) presents the states and their characteristics.

Table 1: The adapted human development states of consciousness model (Beck & Cowan, 1996; Beck et al., 2018)[1]

Instinctive: Natural instincts and reflexes direct existence. This state is also characteristic of the early emergence of the human species where people struggled for their existence and to stay alive. It is focused on fulfillment of basic survival needs.
Animistic: Live according to traditions and rituals of group/clan. This state also describes the beginning of seeking harmony and stability with others for safety in a world that is mysterious and unpredictable.
Egocentric: Asserting self for dominance, impulsive and immediate. This state highlights the human need in certain circumstances to break free and act impulsively to express individual strength. It is the state of power focus.
Absolutistic: Obedience as higher authority and rules direct search for truth. In this state of consciousness humans look for purpose and order to ensure a future. This is the period in human history when monotheistic religions emerged as a basic code for law and order.
Multiplistic: Act pragmatically and calculate to get desired results. In this state individuals and groups strategize to prosper. It is the state of "Strive Drive."
Relativistic: Empathy to feel and desire to respond. This is the state of the human bond when people look inward for connections and attempt to equalize with others.
Systemic: Interconnections and layered causes. In this state people intentionally integrate and align systems.
Holistic/Worldly: Experiential learning, transpersonal living. In this high state people look to synergize and find common goals and systems. They are synthesis oriented.
Tawḥīd: Highest consciousness of human interconnectedness with a collective being. It focuses on oneness with God as well as oneness of "being" with the surrounding environment and each other (see section on *tawḥīd* below).

[1] Parts of this Table were retrieved from http://www.cruxcatalyst.com/2013/09/26/spiral-dynamics-a-way-of-understanding-human-nature/ on 10/13/2019.

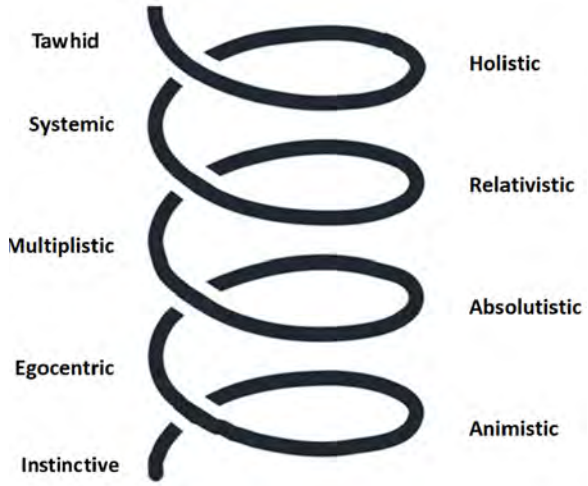


Figure 1: Spiral Dynamics model with *Tawḥīd* as the ninth state.

It is clear based on this model that individual growth does not happen in a vacuum, for it involves a process that relies heavily upon the human capacity to change systems as "old ones fade away in the spiral and new ones emerge" (Beck et al., 2018, p. 15). It also involves a parallel process of "changing life conditions such as time, place, problems, and circumstances" (Beck et al. 2018, p. xxiii). In this model, individual growth is determined by physical development in early years and later by circumstances. In addition to the development of spirituality as the individual matures, the model presents a desired trajectory that is transformative through the emphasis on human values in leadership and in intrapersonal and interpersonal growth. Hence, promising interventions are possible to enhance people's state of being and consciousness whether done through policy, business endeavors, or pedagogy and curriculum.

The model as we modified it guides the rationale for this study and the analysis of the empirical research findings; it will be adapted and revised as we interpret the results of the Mapping the Terrain annual study so that we can continue to add meaning to the theoretical framework as well as to the interpretation of our research agenda around education reform. For example, we are interested in discovering and further exploring what kinds of pedagogical and policy interventions would help education systems promote growth trajectories for young people and address factors at play in Muslim societies. The adaptation of this model to Muslim societies' policy making and leadership, especially including the highest stage of *tawḥīd*, is beneficial. Adding *tawḥīd* here is unique and hence requires explanation and elaboration, especially the way it is infused in the model and the way it may be applied in the analysis.

Tawḥid

In the Spiral Dynamics development model, we adopted God's oneness (*tawḥīd*) as the highest state of consciousness one can reach on the developmental model. This is particularly important to clarify here because of the variations in how far this basic belief can be taken. Specifically, it can be interpreted from a very narrow and literal interpretation of the Oneness of God to a broader and a more inclusive view of God. We are using the working definition of *tawḥīd* as part of the model, and any theological interpretation (such as in jurisprudence) is beyond the scope of this report. We take this approach because a simple view of the concept may be taken in the wrong direction. For example, some of those

who believe in *tawḥīd* are confident they their beliefs are superior to all others, while a more in-depth view reveals a more complex revelation of the Oneness of God that applies to monotheism in general and the unity of all of God's creations.

Our view of the concept is based on previous Islamic philosophers and scholars who elaborated on *tawḥīd* not only to describe God as the Creator, but also as the universal power (Aslan, 2011) that enables humans and creatures to live in harmony with self, others, and their surroundings (Al Faruqi, 2000). In our approach, the *tawḥīd* state may be the ultimate for devout Muslims, but it is not exclusive to Muslim believers, as it holds relevance for individuals from other religions and convictions as well. This model is aligned with Wilber's articulation (2007) that moral development tends to move from "me" (egocentric) to "us" (ethnocentric) to "all of us" (worldly) – a good example of the unfolding waves of consciousness (p. 34). Our model takes a step further by emphasizing the "beyond us" state as a higher goal in the developmental trajectory. A person and his or her understanding of *Tawḥīd* and the depth of its manifestation may in fact, go through a developmental process from the lowest states of consciousness (the tribal and egocentric) to the highest in the model (the worldly) and beyond to incorporate a universal consciousness where the only distinction with clear boundaries is between the creator and the creation. Our version of the model relies on the initial premise that values may be considered innate and instinctive qualities and may not require any after worldly incentives to be expressed in behaviors toward the creation – our fellow humans and our surroundings (Haidt, 2001). Hence, the ninth state that was never developed in the model (Beck et al., 2018) is for us the *tawḥīd* state. The role of education in this case is to promote the states of consciousness that will bring these human qualities out and utilize those to promote the human development trajectory towards our coexistence.

Several prominent scholars of Islam articulated the inclusive views of *tawḥīd* that support its integration in the human development model as our framework. Several classical Islamic philosophers such as Abduh, (1906) and Al-Ghazali (1095/2001) assert that the declaration of one's belief is not where *tawḥīd* ends and that it is not enough to do so. In fact, *tawḥīd* extends to one's relationship with both God and all creation (Qurtuby, 2013). For Muslim reformists such as Abduh, *tawḥīd* is a "theology of unity" (Qurtuby, 2013, p. 308) because it is not just a declaration; it is the study of God Himself including God's 99 attributes which provide a thorough description of God's virtues. When interpreting some of the classical work on *tawḥīd* further, it is commonly understood God who knows all about people, but it is people's duty to learn about God. Thus, knowing God and His attributes strengthens the relationship between a human and his/her Creator, leading people closer to achieving *tawḥīd*. More recently, scholars such as Qurtuby (2013) and El-Moslimany (2018) re-emphasize the assertion that *tawḥīd* does not simply mean believing in the oneness of God but also "the unity of humankind and the whole creation." *Tawḥīd* "is basically the central precept of Islam aiming at establishing social justice (*'adl*) and creating equal social structures within societies, which is a vital ingredient for peacemaking mainly because peace without justice is an illusion" (Qurtuby, 2013, p. 313). Believing in the oneness of creation removes arrogance, prejudice, and injustice. Qurtuby further argues that *tawḥīd* is not only a declaration but is also the key to ridding man of hatred, oppression, and other sinful behaviors. Therefore, the purpose of *tawḥīd* is not to proclaim God's oneness, but to behave in a way that is conscious of God's watch over the entire world.

It is clear from the reviews of previous work by Islamic scholars that *tawḥīd* applies to one's everyday life where a Muslim demonstrates and applies the Islamic values and moral code. El-Moslimany (2018) clearly articulates that when she states: "Humanity too is a rich mosaic of individuals – all from a common origin, but who became geographically separated to form distinct populations and cultures, superficially different but meant to know and learn from one another" (p. 18). Thus, according to her and others, *tawḥīd* is key to achieving happiness on earth and in the hereafter.

Head-Heart-Hands

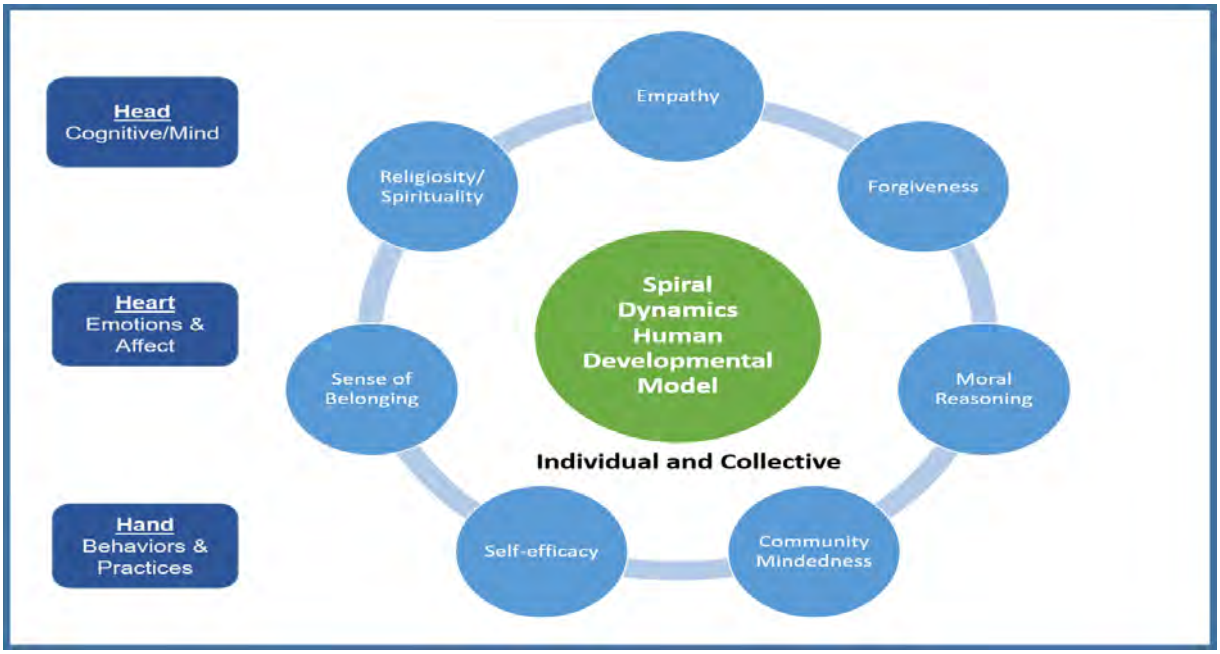


Figure 2: Operational Framework

To enhance people's abilities to gain access to all levels of development described and to empower them to move on the developmental trajectory through data-driven and evidence-based knowledge, we utilize the Head-Heart-Hands model as a mechanism to engage people in change and transformation (Krathwohl, Bloom, & Masia, 1964; Orr, 1992; Sipos, Battisti & Grimm, 2008) that may be applied in education programs, interventions, and policies (See Figure 2).

In this model, the Head (knowledge, perceptions, thoughts, and metacognition), Heart (relational knowledge of emotional and social values and insights), and Hands (deep engagement in doing and active use of concepts) all work together and simultaneously (Sipos, Battisti, & Grimm, 2008). The "3H" approach suggests that any transformation should take into consideration the whole person.

The 3H transformative model aligns well with Islamic teachings, where connections between Head, Heart, and Hands are discussed in writings of scholars of Islamic education (for example, (Kilani, 1996), especially in the areas of cognition, intuition, and their relationship with action. Head corresponds to the Qur'anic concept of *'aql* (head or intellect), which is seen as the repository of cognition, belief, reflections, and perceptions. Heart links with the Qur'anic concept of *fu'ad* (inner heart), responsible for emotions (Agustiar, 2015). Finally, hands relate to the Qur'anic concept of *'amal*, a translation of conscious action combined with intention (*niyyah*). The main function of the 3H model is to describe the mechanism in which empowerment may be utilized at all levels of consciousness.

Combining the adapted Spiral Dynamics developmental model with the head-heart-hands model provides a complex mechanism for advancing human development in a way that is dynamic and non-imposing and has a unique contribution to Muslim societies. In the empirical research and in working with the local teams we implemented the model through:

1. Collaborating with formal and non-formal education institutions and research entities in each site;
2. Engaging religious institutions, scholars, and decision makers in the different localities; and

3. Investing in building research capacity, strengthening the research platform, and improving the quality of empirical studies by offering training and further improvement of research skills. The conceptual framework as well as the methodology will be altered based on the field results and input from local researchers. The annual study is continuously improved as we interpret the results of our studies so that we can continue to add meaning to the theoretical framework as well as to the interpretation of our research agenda on education reform. The intention is to find ways to positively disrupt the trajectory from transmission to transformation in order to ensure values-based and meaningful developmental experiences and life outcomes for all young people in Muslim societies.

Mapping the Terrain 2018-2019

The Mapping the Terrain study includes multiple waves of data collection that are continuous and build on findings successively. In the first attempt to map the terrain, we narrowed down the list of constructs and selected four as mentioned earlier: empathy, forgiveness, moral reasoning, and community mindedness. These are embedded in the developmental states of consciousness that we identified and are hypothesized to describe human growth and progression from egocentric and tribal living/thinking into a more ethnocentric way of thinking. These would eventually progress to the worldly state of mind and the *tawḥīd* state of consciousness. The four constructs are also rooted in universal values, Qur'anic verses, and numerous prophetic examples where there is emphasis on empathy, forgiveness, moral reasoning, and community mindedness and related concepts and values. For example, one of the most emblematic instances is Prophet Muhammad's forgiveness and amnesty issued to the people of Makkah, his birthplace, after he and his followers marched triumphantly into the city. He forgave his enemies, some of whom had murdered members of his family, close friends, and companions (Lings, 1983). There are numerous other examples in Islamic teaching that ground our research in authentic and historical contexts.

Current research confirms the viability of these constructs and their derivatives in the Arab and Islamic contexts. For example, research on forgiveness in the Middle East suggests integrating it in the curriculum and in teacher training (Abu-Nimer & Nasser, 2013). Likewise, research among Muslim Indonesian students shows that Islamic beliefs lead to higher levels of moral reasoning within that population, with such beliefs being positively correlated with orthodox beliefs, prayer, and understanding of justice and equality (Chang-Ho, Ibrahim, & Kim, 2009). Evidence from Bangladesh suggests that happiness among Muslims is strongly related to sense of belonging and connectedness (Devine, Hinks, & Naveed, 2019). The Mapping the Terrain research agenda aspires to provide an evidence-based, multi-country study on the four selected constructs that would improve our understanding not only at the conceptual level, but also – and most importantly – indicate how these constructs may be integrated and infused in education in Muslim societies. The study is therefore a platform for deeper investigations and recommendations for advancing and maximizing educational experiences in Muslim societies.

Constructs

Based on the review of previous literature and our own interpretation of the constructs and their relevance to Muslim societies, the following section provides a brief description of the values and the way we define them as measurable constructs of the study. This review is in no way comprehensive, but it provides a brief view of our research orientation and the way we define the constructs and their fit within the human development model. The idea is that these values may be placed at the various states of consciousness with the possibility of moving back and forth as educational interventions and policies are put in place. Some of the values we included here are in fact part of the Spiral Dynamics model, especially empathy and moral reasoning, as a mechanism to move people between states. Sense

of belonging to the immediate group and beyond as well as community mindedness also constitute an important part of the model and its progression (Beck et al., 2018).

We divided the constructs into two groups that play different roles in the model we hypothesized. Whether a variable is a predictor, or an outcome heavily depended on the review of the literature, especially meta-analyses of previous studies conducted on the constructs where possible (Andrews, 2000; Konrath, O'Brien, & Hsing, 2011). The report attempts, for the first time, to make meaning out of the way these constructs work together to motivate increases from lower to higher states of consciousness and values as well as reaching the inclusive state of *tawḥīd*.

Empathy

Defined as the ability and willingness to care, feel, and take the perspective of others. Empathy has been mostly studied in the developmental psychology field; scholars such as Davis (1994) emphasize both cognitive and affective perspectives of empathy. Many cognitive theorists argue that empathy is grounded in social understanding and is used interchangeably with compassion for others' welfare and state of being. Moral and philosophical theorists, however, suggest that empathy refers to an individual's sympathetic response to others' suffering (Horsthemke, 2015; Zahavi & Overgaard, 2011) and deliberate effort to understand, communicate, and take action based on others' perspectives (Gair, 2012; Hojat, 2007). Research studies on empathy are also in abundance in the healthcare field; results mainly point to the importance of developing a caring mentality early in life.

Empathy is an important value and skill to have, and some suggest that it correlates with social competence and communication skills, among other protective variables such as moral judgment and decrease in aggression (Ahmetoglu & Acar, 2016; Berliner & Masterson, 2015). Several studies in early childhood addressed teachers' empathy and how it is conveyed in interaction with children, as it is also suggested that children as young as 18 months can help others and empathize with others (Sierksma, Thijs, & Verkuyten, 2014). This is also true for adolescents and university students who were taught empathy as part of a program on Emotional Intelligence and showed lower levels of hostility and aggression (Castillo, Salguero, Fernandez-Berrocal & Balluerka, 2013). A sample of college students showed that being employed and joining an academic club predicted higher empathy (Hudson-Flege & Thompson, 2017). Finally, empathy was found to be instrumental in developing morality in previous studies (Paris, 2015; Masterson & Kersey, 2013), hence our choice of moral reasoning as one of our constructs.

Forgiveness

Defined here as the ability and willingness to let go of hard feelings and the need to seek revenge on someone who has wronged the subject or committed a perceived injustice against the subject or others. Forgiveness is a broad and subjective construct which is perceived differently by individuals from different cultures or contexts. Enright and Gassin (1992) define forgiveness as the "willingness to abandon one's right to resentment, negative judgment, and indifferent behavior toward one who unjustly hurt us, while fostering the undeserved qualities of compassion, generosity, and even love toward him or her" (p. 102). Various scholars defined forgiveness while emphasizing the roles and responsibilities of the individual to reach the decision to forgive. For example, according to McCullough and Witvliet (2002) forgiveness can be perceived as a "response, a personality disposition and as a characteristic of social units" (p. 447). Forgiveness is also defined by Ahmed and Braithwaite (2005) to ameliorate and reduce the destructive cycle of conflict and violence between individuals and groups.

Forgiveness is "the emotional replacement of (1) hot emotions of anger or fear that follow a perceived hurt or offense, or (2) ridding of the unforgiveness that follows ruminating about the transgression, by substituting positive emotions such as unselfish love, empathy, compassion, or even

romantic love" (Worthington, 2001, p. 32). Nasser, Abu-Nimer, and Mahmoud (2014) suggest that forgiveness is a personal decision that originates from intrinsic motivation to let go while forgiveness education promotes understanding of different perspectives and reduces stereotypes (Abu-Nimer, 2001a). Studies have found forgiveness to be aligned with psychological health and linked to values such as empathy, gratitude, and life satisfaction. Participants in studies that investigated these correlations suggested that people with higher empathy and gratitude are more forgiving (Marigoudar & Kamble, 2014).

Moral Reasoning

Defined as the ability and willingness to make determinations about right and wrong and act on those, especially making ethical decisions based on that understanding when facing an ethical dilemma (Rest, 1984). Moral reasoning is developmental, and classical theorists such as Kohlberg (1984) suggested that individuals develop the highest level of moral reasoning when they make decisions based on ethical principles without considering their own interests and/or benefits (Wells & Schminke, 2001). In a study among teachers, Temli, Sen & Akar (2013) suggested that pre-service teachers defined morality based on universal values such as honesty and respect. Although it is missing in public schooling in the United States, moral education may promote healthy moral decision making (Brimi, 2009). Professional ethics programs and training can promote moral reasoning by enhancing individuals' knowledge of how to behave ethically when facing an ethical dilemma (Jones, 2009).

Research in the field of moral reasoning and its relationship with other constructs is sparse in Muslim societies (Teymoori, Heydari, & Nasiri, 2014). A new program named "Virtue education" in the United Arab Emirates aims to promote moral education that is "part of the national strategic ambition to develop a progressive, enlightened country, where its residents share a culture despite the diversity" (Pring, 2019, p. 297). Problems arise when some education systems try to "force" certain sets of values into the education system and the community in general and call it moral education (Brimi, 2009). This study will shed light on the perception of Muslim youths regarding moral reasoning and rationalization and provide guidance and recommendations for authentic and well-rounded programing in moral reasoning and other areas as part of a comprehensive plan to infuse values in the development of learners of all ages.

Community Mindedness

We define community mindedness as seeing the self as interconnected with and acting for the benefit of an inclusive whole. This construct is significant and unique for our study because of the various cultural contexts of the countries engaged with us in the research and because even within Muslim societies each community has unique needs and characteristics. Community mindedness may be also infused in the minds of youths through the curriculum and the pedagogy, making it a value as well as a skill that may be attained in learning (Longo, 2013).

To promote community mindedness, formulation of a framework which considers different perspectives and ideas to enhance collaborative thinking and positive interaction among the community members is necessary. Developing this framework is accomplished by community leaders and scholars who are willing to utilize critical thinking and problem-solving skills and are willing to be open-minded and collaborative with different groups in a community. Service in community agencies and organizations (especially in the West) is one way of introducing youths to their community and giving them the opportunity to understand their community's needs. This promotes community mindedness and results in youth engagement. Consequently, this can advance youths' sense of belonging to a greater community (McIntosh, Metz, & Youniss, 2005). There is also empirical evidence for the correlation between empathy and community involvement (Lawford & Ramey, 2017), keeping in mind that community mindedness doesn't necessarily lead to involvement. Yet Lawford

and Ramey (2017) suggest that serving others is "a key predictor of community involvement" (p. 133). Social relationships that play a role in how involved youths are in their communities and how involved teachers are with peers in schools also predicted their involvement with other stakeholders such as parents and the larger community (Preston, 2013).

Religiosity

Defined as the degree of influence one's faith has on his/her values, behaviors and everyday life. According to Huber and Huber (2012), religiosity consists of different dimensions such as public practice, private practice, religious experience, ideology, and intellect. These dimensions together can be considered as representative of the total of religious values and how these values are shaped and practiced in peoples' lives. As Teymoori, Heydari, and Nasiri (2014) state, "Religion is a social institution that dramatically influences individuals' behaviors and daily actions as well as their social and political orientations" (p. 93). Many scholars argue that people seek religion when they are experiencing any kind of stress or hardship, and religion can protect individuals from different mental health issues such as depression and anxiety. According to this perspective, religion fulfills the human need for security and security is one of the basic needs of humans and a foundation for self-actualization (Maslow, 1943, 1954). Recent studies suggest a close relationship between healthy emotional functioning and religion. According to Foster and Armstrong (2017), "Self-regulation, the formation of relationships, and a sense of a separated self are deeply rooted in trust, as is the establishment of love, hope, and courage, which are integral to spiritual and religious experience and development" (p. 141). Religiosity is defined uniquely in this study as a process that is developmental and leads to *tawḥīd* as the ultimate manifestation of Muslim consciousness.

Based on the work in the area of liberation theology and progressive education, the concept of critical religious thinking emerged as a lacking area where the pedagogy of religiosity is at the center instead of religious knowledge (Wang, 2013). This, of course, is less common than the use of the replacement term "spirituality," which came to indicate the ability to be a believer and a spiritual person but not necessarily a religious one. It also seems that spirituality is used widely to describe variations of beliefs and faith while in Muslim societies, where most of the population is religious, spirituality seems to be a less common term to use. Regardless of the definition or terminology used, we have empirical support for the notion that being spiritual or religious doesn't happen in a vacuum but is a complex and a developmental process. The stage theory of faith development by Fowler (1991) illustrates this by suggesting that the experiences in each stage are influenced by close others and the surroundings.

Self-efficacy

In social cognitive theory, Bandura (1986) suggests that self-efficacy is a key construct which positively and strongly correlates with one's cognitive and behavioral engagement in a certain task. Self-efficacy is defined by Bandura (1986, 1997) as a person's belief in his or her ability to organize and execute certain behaviors that are necessary to become successful in a given task. Self-efficacy affects how people think, feel and behave. It influences one's decision to initiate an action, the types of activity and the level of effort, persistence and time that one is willing to consider in completing certain tasks. Many studies support Bandura's claim that a person's beliefs in his or her ability to be successful in a task play a more important role in success than the capability itself. Self-efficacy is malleable and is influenced by four main sources: past performance accomplishment or mastery, vicarious experience, social persuasion, and physiological/psychological states (Bandura, 1986).

Mastery, or enactive experience is a source of self-efficacy, which is influenced by one's belief about the level of success in his or her previous performance in the same or similar tasks. When learners experience success in an academic task, they develop more positive self-efficacy beliefs and a sense of

mastery in doing similar tasks and therefore are more motivated to initiate and complete that task. The second source of self-efficacy, vicarious experience, is a source influenced by modeling. When one realizes that another person with similar characteristic or background is capable of success in a certain task, one becomes more motivated and develops more positive beliefs in one's own ability to succeed in a same or similar task. The third source of self-efficacy, social persuasion, refers to the messages that one receives from others regarding his/her own ability and in being able to successfully complete a desired task. Social persuasion can be transferred in different forms. Another source of self-efficacy is physiological/ psychological states. Self-efficacy is a malleable and context-related variable influenced by emotional and situational conditions. Positive emotions such as pride and joy have a positive correlation with positive sense of efficacy, while anxiety, sadness and other negative feelings lower someone's perception of his/her capability and beliefs in being able to perform a task. Considering these four sources of self-efficacy by educators is very important in promoting student's motivation, academic achievement, and persistence.

Sense of Belonging

Belongingness is a basic human need, the fulfillment of which is necessary for a person's progress toward self-actualization (Maslow, 1962). It is an important source of well-being for all individuals (Baumeister & Leary, 1995). Belongingness, or sense of belonging, is defined as an individual's feeling of identification with a certain group (Tovar & Simon, 2010). Pittman and Richmond (2008) defined sense of belonging as connectedness to one's institution and perception of fitting into an institution (Pittman & Richmond, 2007). A strong predictor of sense of belonging to any community or institution is perceived social support which is a factor positively correlated with coping mechanisms, persistence and physical and socioemotional well-being.

Sense of belonging is a context-related concept which is influenced by environmental and situational variables. In an academic institution, sense of belonging is defined as a student's perception of being supported, accepted, respected, and included in that institution (Goodenow, 1993). Students who perceive that they have positive interactions and good relationships with their peers and teachers are able to develop a stronger sense of belonging. In educational settings, sense of belonging is found to be one of the strongest predictors of students' positive affect, life satisfaction and self-efficacy (Saroughi, 2019). Students' sense of belonging is related to their integration into their institutional interests, their relationships with faculties and peers, participation in campus life, and curricular and extra-curricular activities (Astin, 1999). On the other hand, students' positive interactions and relationships with their campus agents (peers, faculties and staffs) increases students' sense of belonging which in turn promotes their academic achievement and well-being.

3. METHODOLOGY

The methodology described in this section and the empirical results presented in the next section are based on a sample of 14 countries/regions for which data collection and data entry were performed in Wave 1 (see Table 2). Due to factors such as regional differences, financial budget, host-country approvals, and location of affiliate offices, almost all country-level samples were restricted to a few selected regions. However, an effort was made to randomize as much as possible the selection of schools and universities from each region, and the selection of students within each institution. All individuals directly involved in data collection received training about protocols required for research involving human subjects.

Sample Groups

Data was collected from five distinct groups of respondents: school administrators, school teachers, school students, their parents, and university students. Figure 3 shows the distribution of survey respondents by survey type and Figure 4 shows their distribution by country. The largest sample (n = 3,516) was collected from Bangladesh while the smallest sample came from Azerbaijan (n = 201). Mean sample size was 1,545 (Median = 1,165, SD = 877). There was also variation in distribution of survey type across countries. Table 2 shows the cross-tabulation of survey type by country.

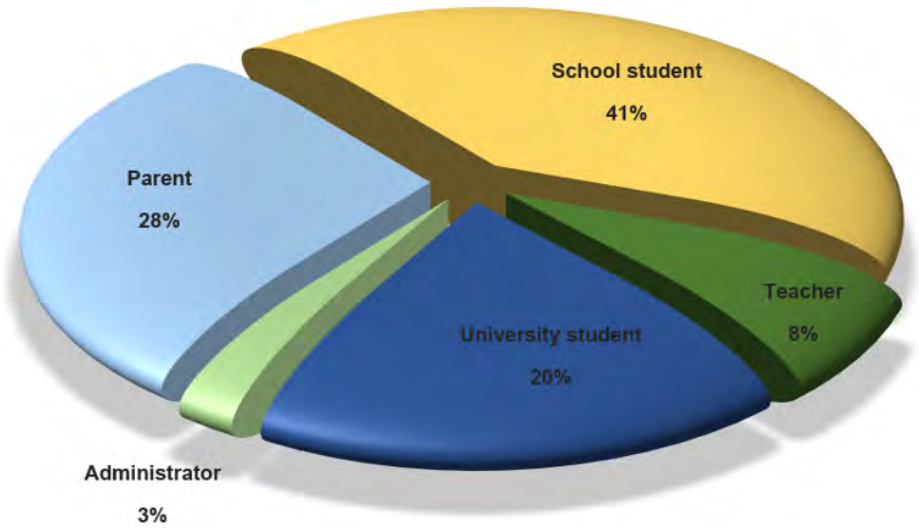


Figure 3: Distribution of survey respondents by survey type.

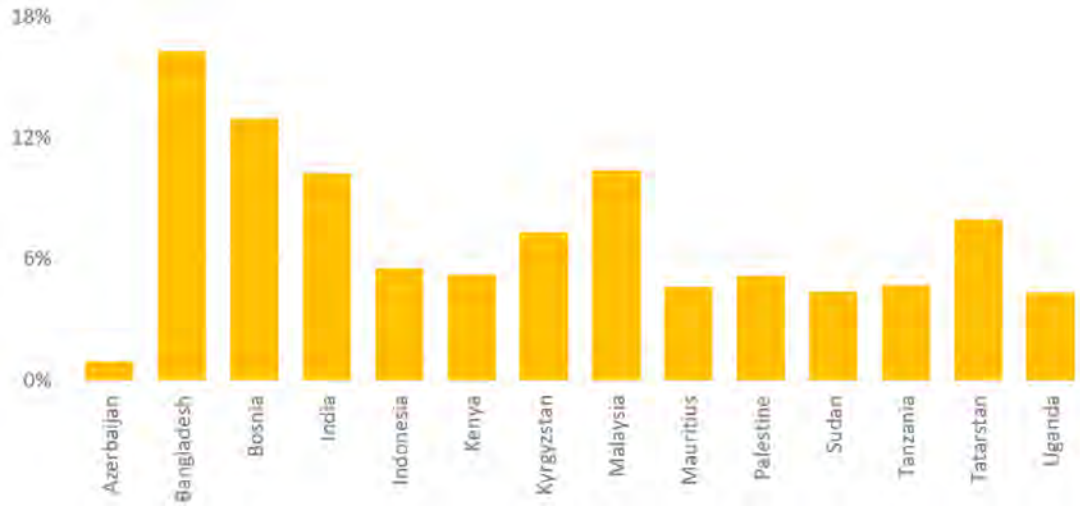


Figure 4: Distribution of survey respondents by country.

Table 2: Distribution of survey type by country.

	Survey type					
Country	**Administrator**	**Teacher**	**Parent**	**University student**	**School student**	**Total**
Azerbaijan	–	40	103	–	58	201
Bangladesh	58	238	1,485	250	1,485	3,516
Bosnia	48	304	586	1,106	756	2,800
India	15	96	798	500	800	2,209
Indonesia	100	150	398	400	149	1,197
Kenya	70	74	320	128	541	1,133
Kyrgyzstan	20	30	431	300	804	1,585
Malaysia	58	120	713	180	1,174	2,245
Mauritius	20	114	257	192	409	992
Palestine	6	23	8	250	833	1,120
Sudan	9	81	400	229	228	947
Tanzania	20	101	46	299	554	1,020
Tatarstan	29	112	406	371	800	1,718
Uganda	69	169	141	200	364	943
Total	522	1,652	6,092	4,405	8,955	21,626

Measures

Questions related to seven scales of interest were included in the surveys. Two of these scales, community mindedness and forgiveness, were treated as outcome variables, whereas the rest were treated as predictors. This latter group of scales included religiosity/spirituality, moral reasoning, self-efficacy, empathy, and sense of belonging. The hypothesized model is presented in Figure 5. The number of items per scale, number of subscales, and item wording are presented in Appendix B. We used confirmatory factor analysis to confirm the factor structure of each individual scale. Items flagged as problematic by factor analysis were discarded prior to a detailed reliability analysis of each scale and subscale by country and survey type. Detailed factor analysis and reliability results are presented later in this report.

The design of our survey questionnaire for the different groups of participants was a gradual process that took several months and multiple steps. This process involved collaboration among several members of the research team who were very familiar with the sociocultural factors of the regions where the participants in the survey lived. The research team reviewed multiple questionnaires using different scales and formats until the final draft was approved. One of the critical steps of this process was the selection of the scales used in this study. This selection was based on extensive literature reviews and multiple discussions among experts in the field. The research team reviewed previous studies across different regions in international settings to identify scales that were best fit to the constructs and matched the participants' characteristics. Finally, besides demographic questions such as age, education, gender, and ethnicity, several scales were chosen for the survey. Different aspects and criteria were considered in the selection of each item and scale used in the survey questionnaire.

First, the scale needed to be specific to the constructs of our interest and considered to have a good reliability and validity by the scale developer or by other researchers across different samples with characteristics similar to our participants'. In addition, the items needed to be culturally sensitive toward our participants. Therefore, in some cases, after identifying scales that could match our criteria, there was a need for some modification. For example, instead of using the whole scale we had to select just certain subscale/s or portion of that scale in order to avoid including items which were culturally biased and irrelevant to our study. The other considerations in selecting the subscales/items were related to the length of the survey; we wanted to prevent participants' exhaustion in order to retain their attention during the completion of the survey. Another modification was changes in the response format of some of the scales. Since we had several scales with different response formats, we aimed to make a more homogenous response format across the whole questionnaire to prevent participants' confusion. Finally, the other consideration in the design of the survey was to choose scales including items that were worded in an unbiased manner, easily understandable, and easy for all groups of participants to follow and respond to.

The scales that were included in the questionnaire are listed below (for a list of items see Appendix B).

Empathy

Empathy included 4 different subscales including: Perspective taking, Affective, Cognitive inclusion and Caring. All the subscales were used with all the samples.

Overall (including all the subscales), this scale had Cronbach's alpha reliability coefficient of (α =.87) in this study. This scale included different subscales as follows:

1. Perspective taking

For this subscale the Interpersonal Reactivity Index scale by Davis (1983) was used.
The Interpersonal Reactivity Index Scale assesses empathy as the "reactions of one individual to the observed experiences of another and includes 28 items and 4 subscales (Perspective Taking, Fantasy, Empathic Concern, and Personal Distress), each made up of 7 different items. For the purpose of this study, we just used Perspective Taking subscale – the tendency to spontaneously adopt the psychological point of view of others. From 7 items of this subscale, 2 items were flagged in factor analysis and were removed from the final analysis. Examples of the remaining items included:

- I sometimes try to understand my friends better by imagining how things look from their perspective.
- I believe there are 2 sides to every question and try to look at them both.

This scale had Cronbach's alpha reliability coefficient of (α =.72) in this study across all countries.

2. Affective

For this subscale the "Toronto Empathy Questionnaire" by Spreng, McKinnon, Mar & Levine (2009) was used. This scale included 16 items. From 16 items of this scale, 10 items were flagged in factor analysis and were removed from the final analysis.
Examples of the remaining items included:

- It upsets me to see someone being treated disrespectfully.
- When I see someone being taken advantage of, I feel kind of protective toward him/her.

This scale had Cronbach's alpha reliability coefficient of (α =.68) in this study across all countries.

3. Cognitive inclusion

For this subscale, "The Scale of Ethnocultural Empathy" by Wang et al. (2003) was used. This scale has 31 items and 4 subscales: Empathic Feeling and Expression, Empathic Perspective Taking, Acceptance of Cultural Differences, and Empathic Awareness. However, for the purpose of this study we have included 5 items of this scale. From these 5 items 2 items were flagged in factor analysis and were removed from the final analysis.
Examples of the remaining items included:

- When I hear people make jokes about other groups of people, I tell them I am offended even though they are not referring to my group.
- I express my concern about discrimination to people from other groups.

This scale had Cronbach's alpha reliability coefficient of (α =.57) in this study across all countries.

4. Caring

For caring, the scale of "Generative altruism" by Büssing, Kerksieck, Günther & Baumann (2013) was used. The 7-item Generative Altruism Scale (GALS) includes both affective and behavioral elements.
Examples of these items included:

- I help others even when there is no direct benefit to me.
- If someone I do not know asks me for help, I will immediately help them.

This scale had Cronbach's alpha reliability coefficient of (α =.78) in this study across all countries.

Religiosity / Spirituality

Religiosity/spirituality was measured by the following scales:
1. The Centrality of Religiosity Scale (CRS) by Huber and Huber (2012) (used in all the samples)

Centrality of Religiosity Scale is a measure of the centrality, importance, and salience of religiousness in a person and it includes 7 items.

Examples of these items included:
- How important is prayer for your religious beliefs?
- How important is it for you to feel that God intervenes in your life?

This scale had Cronbach's alpha reliability coefficient of ($\alpha = .93$) in this study across all countries.

2. The Religious Commitment Inventory-10 (RCI–10) by Worthington, et al. (2003). RCI-10 examines intrapersonal religious commitment (6 items) and interpersonal commitment (4 items). These 10 items were used in the samples of teachers, administrators and parents.

Examples of these items included:
- I enjoy spending time with others of my religious affiliation.
- I make financial contributions to my religious organization.

According to the authors, some items of this scale were adapted from Hoge (1972) and from King and Hunt (1969). This scale had Cronbach's alpha reliability coefficient of ($\alpha = .91$) in this study across all countries.

Forgiveness

Forgiveness included 2 different subscales. Overall (including all the subscales), this scale had Cronbach's alpha reliability coefficient of ($\alpha = .78$) in this study across all countries.
The subscales included were:

1. My attitudes

This scale was a combination of several commonly used scales including the Transgression- Related Interpersonal Motivations (TRIM) Inventory developed by McCullough, et al. (1998). The scale had 12 items; 4 items were flagged in factor analysis and removed from the final analysis.
Examples of the remaining items included:
- I derive my ability to forgive from my religious/spiritual values.
- Anger affects my decision of forgiveness to a great extent.

This scale had Cronbach's alpha reliability coefficient of ($\alpha = .72$) in this study across all countries.

2. Decisions

The Multidimensional Forgiveness Scale which was originally developed by Tangney, Boone, Fee, & Reinsmith, 1999, was used. It was modified to align with the survey and its structure. This scale had 9 items; 2 items were flagged in factor analysis and removed from the final analysis. Examples of the remaining items included:
- Imagine that your brother/sister borrowed your car and while he/she was driving it he/she crossed a red light and hit another car, which caused a great damage to your car, but no one was hurt.
- Imagine a young man from your town who was almost engaged to one of your sisters broke up with her.

This scale had Cronbach's alpha reliability coefficient of ($\alpha = .80$) in this study across all countries.

Moral Reasoning

Moral reasoning included 2 subscales: Affective and Cognitive/Decisions. For both subscales, the measure of "Moral Foundations Questionnaire" (MFQ) by Graham, Haidt, and Nosek (2008) was used.
Overall (including all the subscales), this scale had Cronbach's alpha reliability coefficient of (α =.68) in this study across all countries.

The MFQ scale has 30 items and two parts. One part of the scale includes items that asks participants to identify to what extent each statement is relevant to their thinking, and the other part asks participants to identify whether something is right or wrong.

For the purpose of this study we used 11 items of this scale; 5 items of the first part of the MFQ scale was used for the affective subscale.

Examples of these items included:
- People should be loyal to their family members, even when they have done something wrong.
- Justice is the most important requirement for a society.

Affective scale had Cronbach's alpha reliability coefficient of (α =.59) in this study across all countries.
And 6 items of the other part of MFQ was used for the Cognitive/Decisions subscale, and from this number only 1 item was flagged in factor analysis and removed from the final analysis.
Examples of the remaining items included:
- Whether or not someone acted in a way that God would approve of.
- Whether or not someone showed a lack of respect for authority.

This scale had Cronbach's alpha reliability coefficient of (α =.74) in this study.

Sense of Belonging
(Specific to students)

Sense of belonging was measured by the 3 subscales: schooling, social support, and relatedness. Overall, including all the subscales, this scale had Cronbach's alpha reliability coefficient of (α =.91) in this study across all countries.
Subscales are as follows:

1. Schooling
Schooling was measured by The Psychological Sense of School Membership (PSSM) Scale by Goodenow (1993). This 18-item scale was initially developed for school students and was used for school students in this study. A modified version of this 18-item scale using different wording structure was developed by Pittman and Richmond (2007) to fit for the university students; this modified version was used for university students in this study. From these 18 items, 7 items were flagged in factor analysis and were removed from the analysis.
Examples of the remaining items included:
- Other students here like me the way I am.
- People here know I can do good work.

This scale had Cronbach's alpha reliability coefficient of (α =.83) in this study.

2. Social support
Social support was measured by Abbreviated Duke Social Support by Koenig et al. (1993). This scale is a shortened 11-item version of the Duke Social Support Index (DSSI), which was modified and validated by Powers, Goodger, and Byles (2004) and

then was further modified for the purpose of our study. From the 11 modified items which were included, 2 items were flagged in factor analysis and removed from the analysis. The remaining items included:

- I feel that my family understands me.
- I feel useful to my friends.

This scale had Cronbach's alpha reliability coefficient of (α =.86) in this study.

3. Relatedness

Two measures were used in the Relatedness subscale. The first one was part of the three subscales of the general Basic Psychological Need Satisfaction. This scale was developed by Deci & Ryan (2000) and Gagné, Ryan & Bargmann (2003), and its relatedness subscale includes 8 items that were used in this study. Three items were flagged in factor analysis and were removed from the analysis.

Examples of the remaining items included:

- I really like the people I interact with.
- I get along with people I come into contact with.

The second measure used in the relatedness subscale in our study was taken from "Problematic Social Networking Services Use" by Lou, Liu, Liu, (2017). This is a 27-item scale. In our study we used just 2 items of this scale which were flagged in factor analysis and were removed from the analysis. In addition, there was another item developed and used to find out participants' tendency and preference in involving in online activities and relationships. In total 6 items remained in relatedness subscale after factor analysis was conducted.

This scale had Cronbach's alpha reliability coefficient of (α =.71) in this study, across all countries.

Self-efficacy

(Specific to teachers and administrators)

For teachers and administrators' sample, self-efficacy was measured by 2 different subscales including: Efficacy and Need satisfaction. Overall (including all the subscales), this scale had Cronbach's alpha reliability coefficient of (α =.90) in this study across all countries.

Subscales are as follows:

1. Efficacy

Efficacy was measured by Self-Efficacy by Bandura (2006). This scale was used to help gain a better understanding of the kinds of things that create difficulties for teachers and administrators in their school activities. We used 13 items of this scale, and from this number, 3 items were flagged in factor analysis and were removed from the analysis. Examples of the remaining items included:

- How much can you help other teachers with their teaching skills?
- How much can you do to reduce school dropout?

This scale had Cronbach's alpha reliability coefficient of (α =.89) in this study across all countries.

2. Need satisfaction

This subscale was measured by the Basic Psychological Need Satisfaction Scale – Work Domain by Deci, Ryan, Gagné, Leone, Usunov, and Kornazheva (2001); Ilardi, Leone, Kasser, and Ryan (1993); and Kasser, Davey, and Ryan (1992).

This 21-item scale addresses need satisfaction at work and has been used often (Deci, Ryan, Gagné, Leone, Usunov, &

Kornazheva, 2001; Ilardi, Leone, Kasser, & Ryan, 1993; Kasser, Davey, & Ryan, 1992). The scale has evolved and changed since its first use in Kasser, Davey, and Ryan (1992).
Nine items were flagged in factor analysis and were removed from the analysis.
Examples of the remaining items included:

- I feel like I can make a lot of inputs to deciding how my job gets done.
- I really like the people I work with.

This scale had Cronbach's alpha reliability coefficient of (α =.89) in this study across all countries.

Self-efficacy

(Specific to students only)

Self-efficacy for students was measured by General Self-Efficacy (GSES-12), which was originally developed by Sherer et al. (1982) and was then modified by Bosscher and Smit (1998).
Overall (including all the subscales), this scale had Cronbach's alpha reliability coefficient of (α =.70) in this study across all countries.

This scale includes 3 subscales including initiative, effort, and persistence and a total number of 12 items. All these items remained in the analysis after factor analysis was completed.

1. Initiative

This subscale had 3 items. Examples of these items included:

- If something looks too complicated, I will not even bother to try it.
- I avoid trying to learn new things when they look too difficult.

This scale had Cronbach's alpha reliability coefficient of (α =.69) in this study.

2. Effort

This subscale had 5 items. Examples of these items included:

- When I make plans, I am certain I can make them work.
- If I can't do a job the first time, I keep trying until I can.

This scale had Cronbach's alpha reliability coefficient of (α =.67) in this study across all countries.

3. Persistence

This subscale had 4 items. Examples of these items included:

- When I set important goals for myself, I rarely achieve them.
- I do not seem capable of dealing with most problems that come up in my life.

This scale had Cronbach's alpha reliability coefficient of (α =.69) in this study across all countries.

Analytical Method

We used mean scale scores based on items retained from factor analysis in a series of multiple regression models. Regression analysis was conducted separately for each of the five surveyed populations. The choice of predictors in the multiple regression models was based on two factors: (1) the scales and items administered, and (2) a sample size of at least 20 per category for a demographic predictor. Since construction of a single regression model applicable to all survey groups would have resulted in large attrition in sample size, number of scales, and number of items, the regression models (although very similar) are not directly comparable across survey groups.

We estimated two regression models for each outcome variable. The first model contained only demographic predictors while the second model included both demographic and scale predictors. The change in R square between the two models thus can be used as an indicator of the importance of scale predictors in explaining the total proportion of variation in community mindedness and forgiveness, our outcome variables. We evaluated all model assumptions and calculated zero order correlations as measures of effect size for bivariate relationships in order to compare these unadjusted associations with adjusted estimates from multiple regression models.

Power Analysis

To ensure that our hypothesis tests had adequate power, we conducted a power analysis for the proposed multiple regression models using the G*Power program. Results from this analysis suggested that even in our multiple regression model with the smallest effective sample size (administrator sample, n = 385 after listwise deletion), the number of cases was large enough to ensure detection of an overall R-square value as small as 5% at .01 level of significance with a target power of 95%. In other words, if a medium or large significant effect exists in our data then it is very unlikely that it will not be detected.

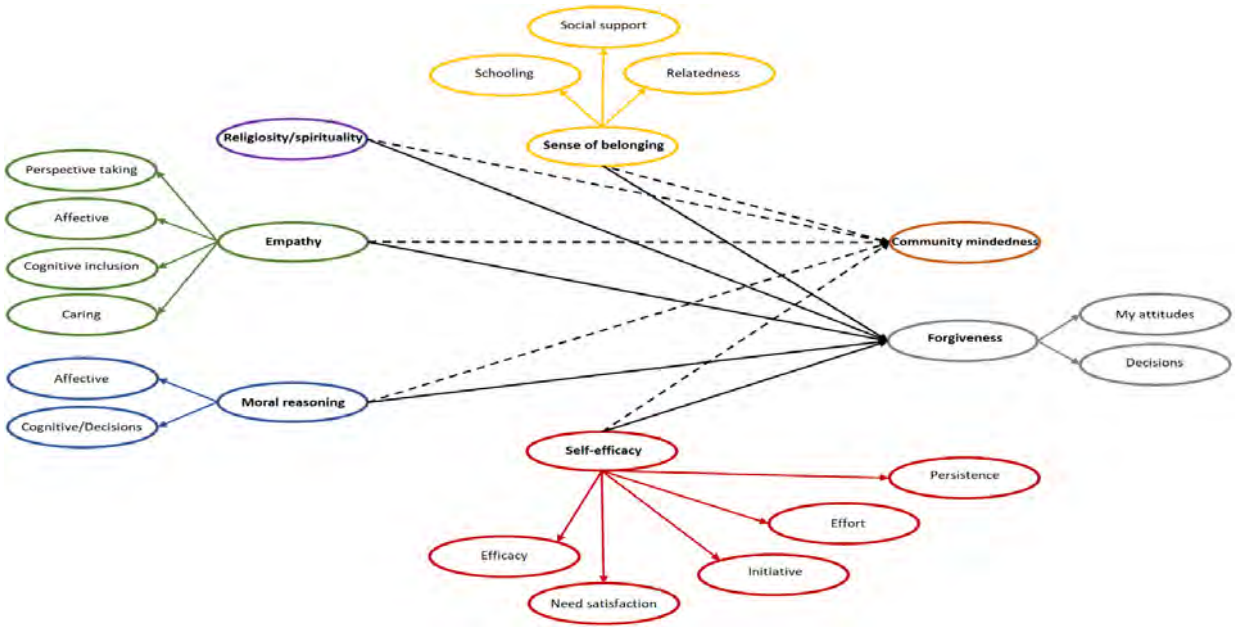


Figure 5: Hypothesized model showing relationships among scales, and between scales and subscales.

Demographic Information

Gender

The sample was approximately evenly split between male and female survey respondents (Figure 6). The distribution of gender within each survey type was also approximately equal as shown in Table 3 and the tree map in Figure 6. There was some variation in distribution of gender across countries, as can be seen in Table 4 (after removing the missing data). Specifically, a disproportionately larger number (gap > 50%) of males was sampled in Palestine whereas a disproportionately larger number (gap > 50%) of females was sampled in Kyrgyzstan, Malaysia, Mauritius, and Tatarstan.

	Gender		
Survey type	Female	Male	Total
Administrator	250	264	514
Parent	3,061	2,903	5,964
School student	4,954	3,770	8,724
Teacher	945	678	1,623
University student	2,306	1,749	4,055
Total	11,516	9,364	20,880

Table 3: Distribution of respondent gender by survey type.

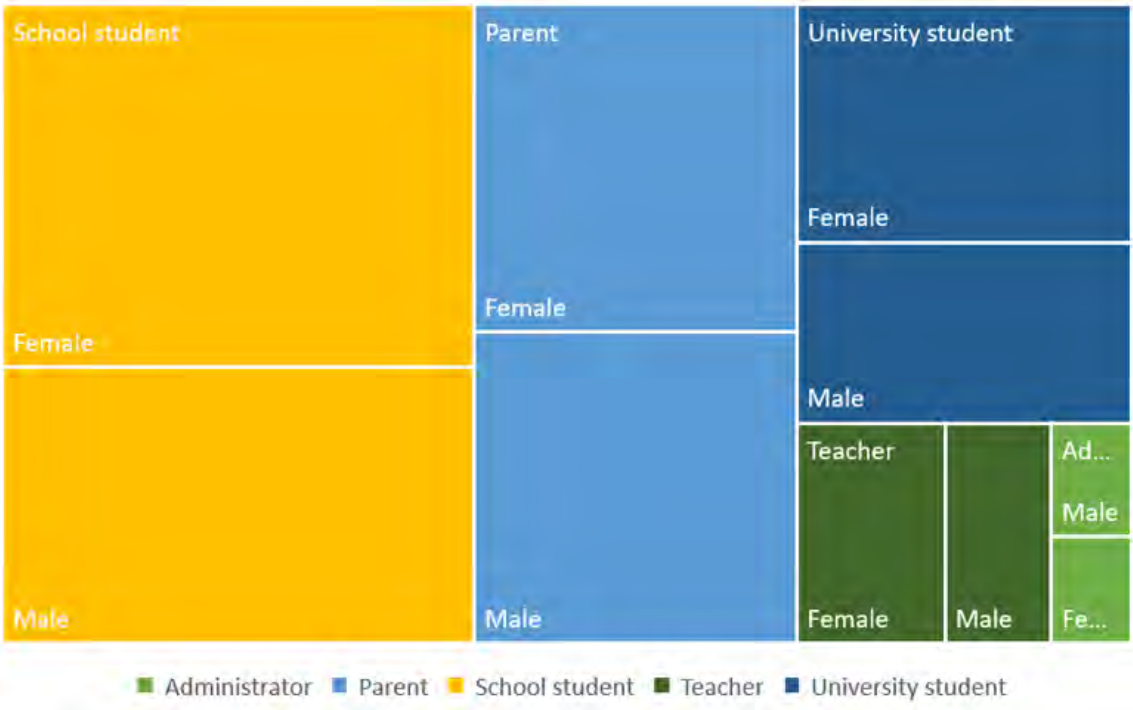


Figure 6: Distribution of respondent gender by survey type.

	Gender		
Country	Female	Male	Total
Azerbaijan	144	53	197
Bangladesh	1,604	1,845	3,449
Bosnia	1,542	1,186	2,728
India	920	1,270	2,190
Indonesia	681	487	1,168
Kenya	563	546	1,109
Kyrgyzstan	950	621	1,571
Malaysia	1,486	735	2,221
Mauritius	732	242	974
Palestine	294	473	767
Sudan	498	403	901
Tanzania	537	462	999
Tatarstan	1,120	579	1,699
Uganda	445	462	907
Total	11,516	9,364	20,880

Table 4: Distribution of respondent gender by country.

Age

Information on age was collected from all survey respondents. This variable was operationalized as an ordinal variable, with age groups Less than 18, 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, and 75 or older. The distribution of survey respondents by age is shown in Figure 7. The largest category was Less than 18 (n = 7,847) reflecting the largest group of survey respondents, the school students (n = 8,955). The distribution of respondent age by gender is shown in the population pyramid in Figure 8. Figure 9 shows the distribution of respondent age by survey type based on means from grouped data, and Table 5 shows the distribution of respondent age by country.

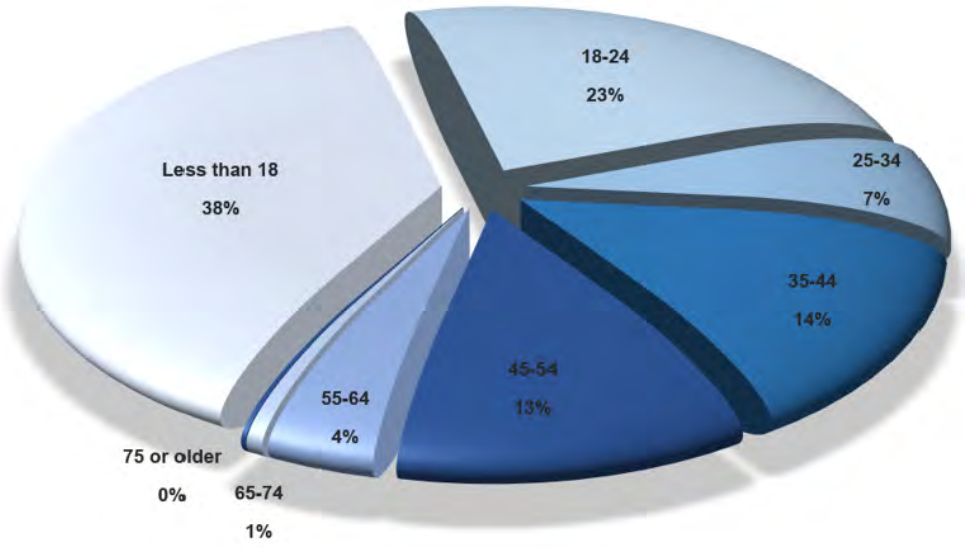


Figure 7: Distribution of survey respondents by age.

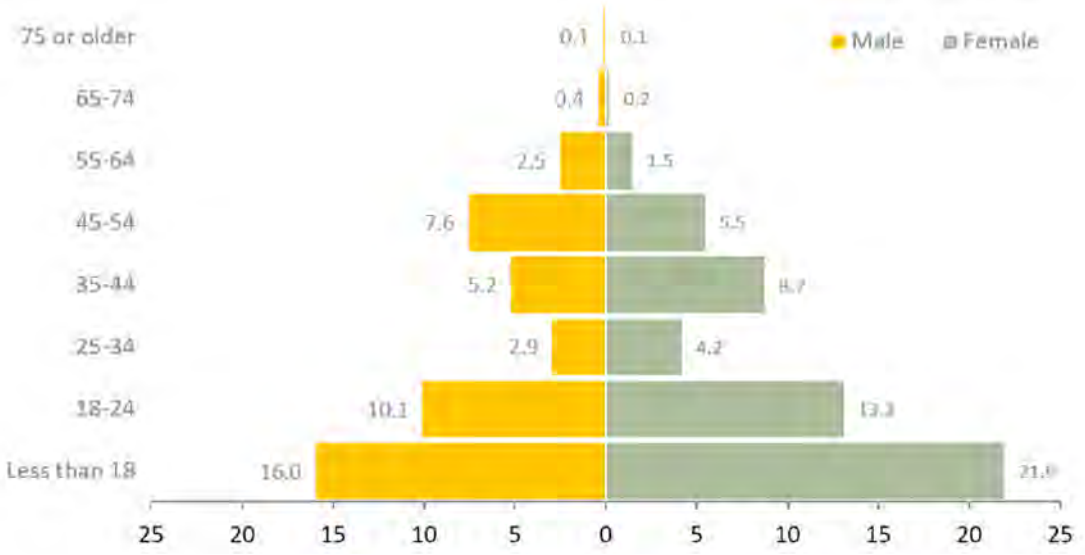


Figure 8: Percentage of respondents by age and by gender in the overall sample.

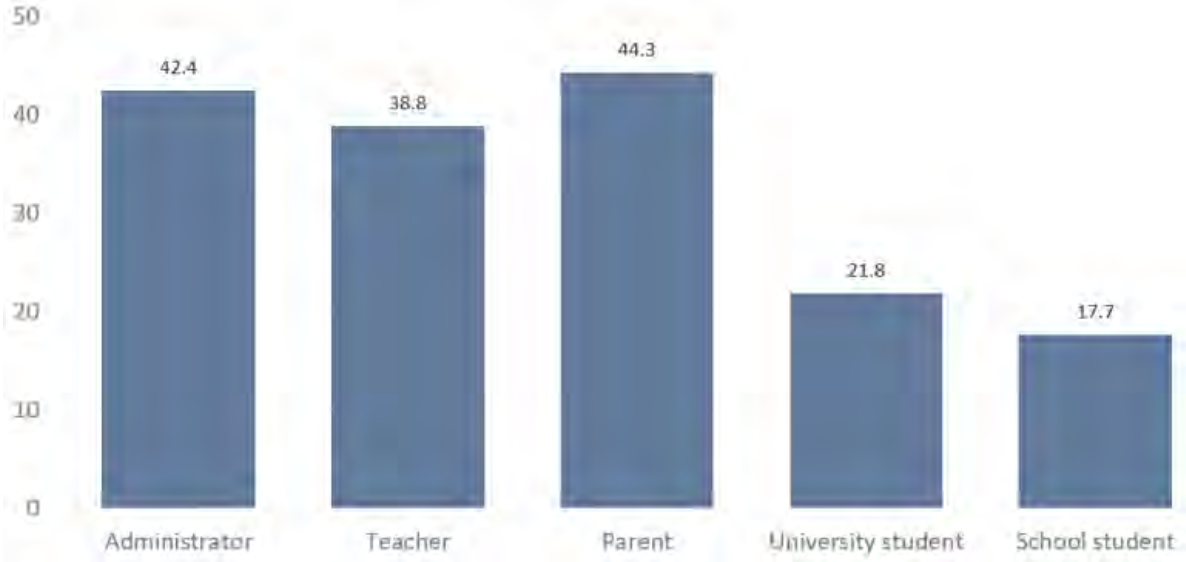


Figure 9: Mean respondent age by survey type.

Table 5: Distribution of survey respondents by age and by country.

Country	Age group							
	Less than 18	18-24	25-34	35-44	45-54	55-64	65 or older	Total
Azerbaijan	58	5	41	45	25	16	5	195
Bangladesh	1,485	290	248	716	565	139	22	3,465
Bosnia	384	1,440	137	362	344	101	3	2,771
India	765	521	80	318	408	93	10	2,195
Indonesia	130	431	128	185	217	76	10	1,177
Kenya	369	296	192	133	80	40	16	1,126
Kyrgyzstan	781	316	62	161	127	91	36	1,574
Malaysia	1,134	201	70	283	428	106	6	2,228
Mauritius	377	209	118	119	75	65	18	981
Palestine	720	12	15	6	9	4	1	767
Sudan	195	231	85	139	153	61	16	880
Tanzania	493	271	127	54	41	13	11	1,010
Tatarstan	774	363	52	275	182	29	14	1,689
Uganda	250	304	136	122	76	13	5	906
Total	7,915	4,890	1,491	2,918	2,730	847	173	20,964

Marital Status and Number of Children

The marital status question was administered to administrators, teachers, and parents but not to university and school students. This is a nominal variable with six mutually exclusive categories: single (never married), married (living together), married (living separately), divorced, widowed, and other. The univariate distribution of marital status is presented in Figure 10. Only administrators, teachers, and parents were asked about the number of children that they had. The overall distribution of number of children was positively skewed (Figure 11).

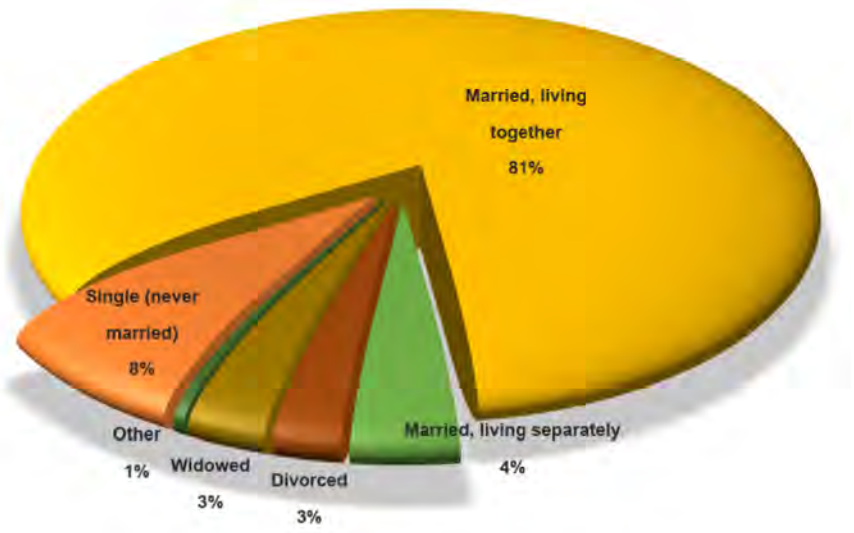


Figure 10: Distribution of marital status.

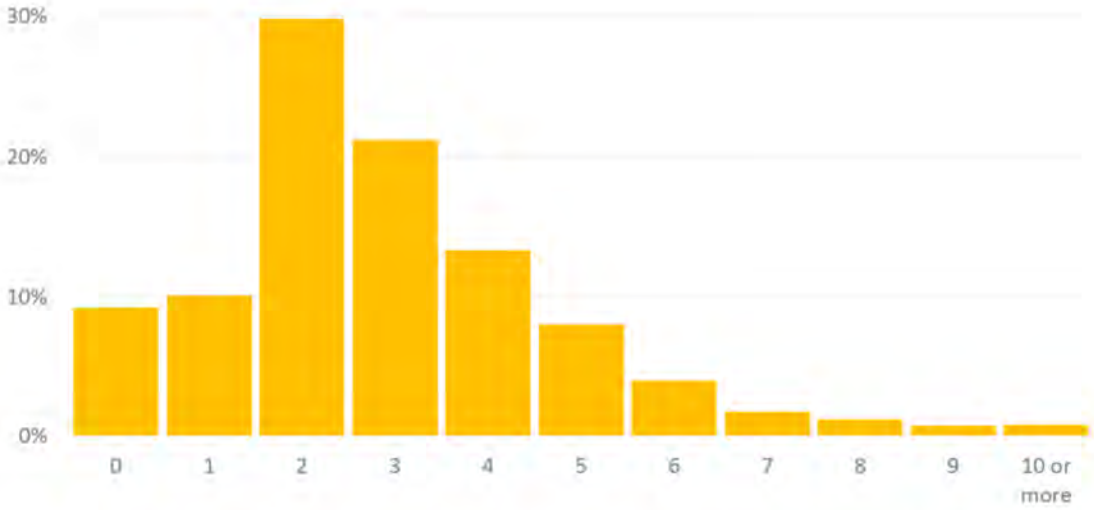


Figure 11: Distribution of number of children in the overall sample.

Highest Level of Education Completed

The education question asked administrators, teachers, and parents for their highest level of education completed and had nine categories (Figure 12). Relationship of highest education level with survey type is shown in Figure 13.

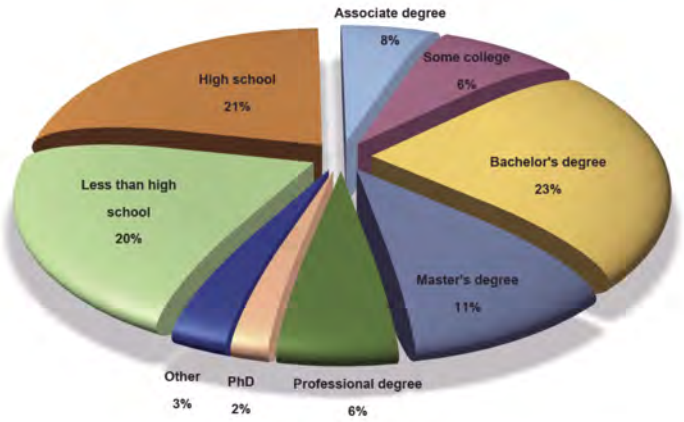


Figure 12: Distribution of education level.

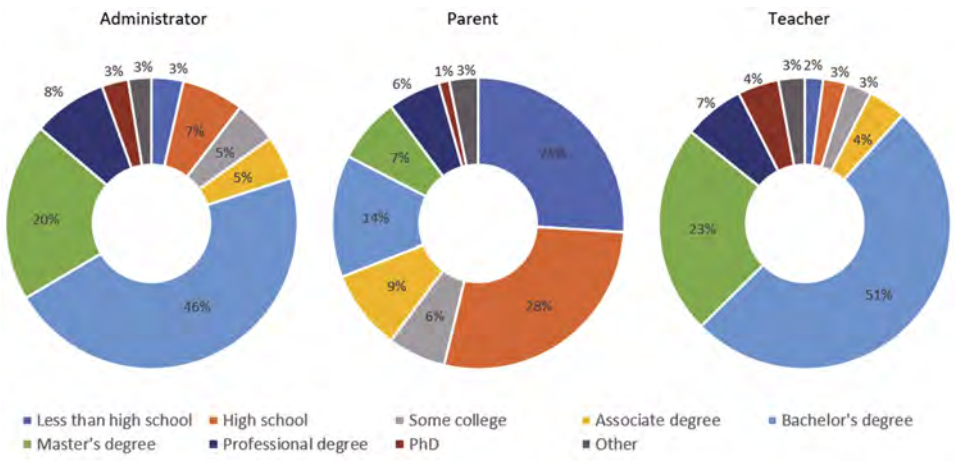


Figure 13: Distribution of highest level of education completed by survey type.

Current Grade in School/Current Year in University

A separate question was used to collect information on current grade level of school students. Distribution of grade is presented in Figure 14. A separate question was used to collect information on current year of study of university students. Distribution of year is presented in Figure 15.

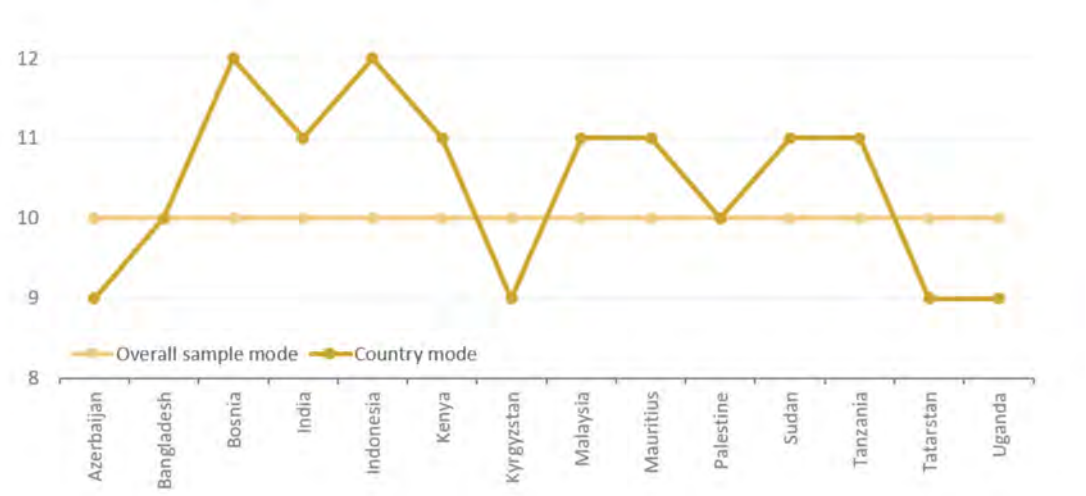


Figure 14: Modal grade in school by country.

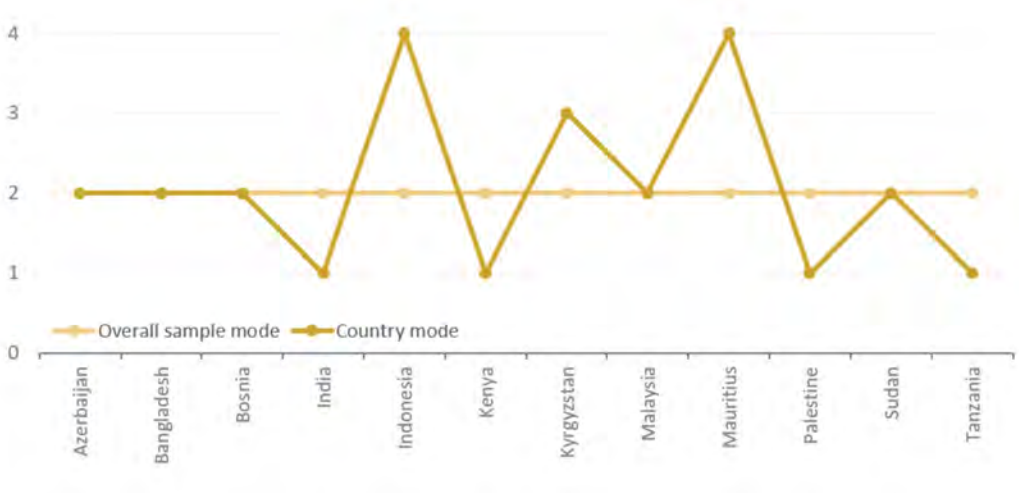


Figure 15: Modal year in university by country.

Tenure and experience

Tenure was measured as the total number of years in current job. The distribution of tenure was positively skewed. Experience was measured as the total number of years of professional experience. The distribution of experience was positively skewed.

Religion

The religion question asked each respondent about their current religion. The distribution of religion in the overall sample is presented in Figure 16. Distribution of religion by country is presented in Figure 17.

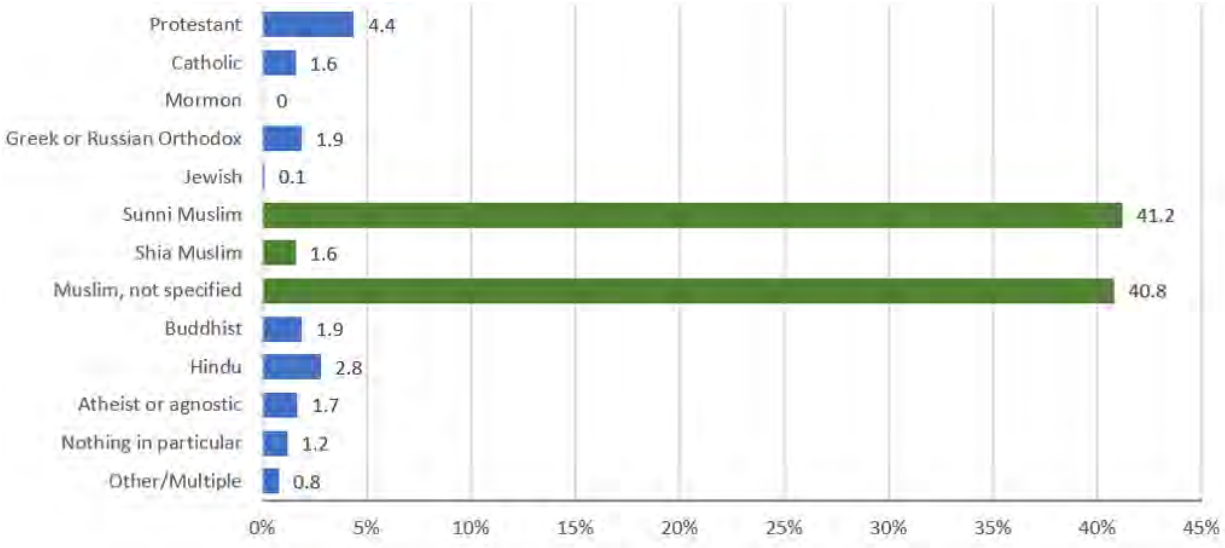


Figure 16: Distribution of religion.

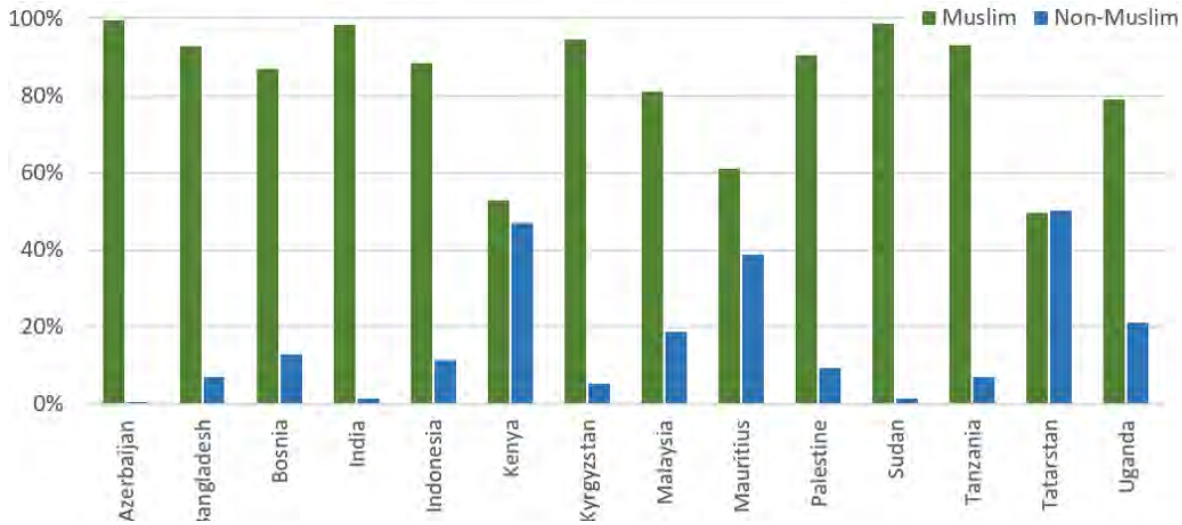


Figure 17: Distribution of religion within each country.

4. ANALYSIS AND FINDINGS

A summary of scales administered in the survey is shown in Table 6. A check mark in this table indicates that the scale was administered to the corresponding population. For example, the community mindedness items were administered to all populations except school students. A full description of scale items with corresponding codes is provided in Appendix B. All scale items were administered on a 1-5 Likert scale. Responses were reverse coded when relevant, so higher values on each scale are consistent with higher values of the latent construct.

Factor Analysis

We used factor analysis to confirm the structure of each scale. Confirmatory factor analysis procedure flagged several problematic items. We removed each flagged item individually and performed factor analysis again in order to evaluate the adequacy of factor loadings (minimum criterion for factor loading was 0.3). This process was repeated until we found a sound factor structure. Factor analysis results are summarized in Table 7, and suggest that sample sizes, Kaiser-Meyer-Olkin (KMO) statistic (cut-off = 0.6), and p value on Bartlett's test of sphericity (cut-off = 0.01), were adequate. The proportion of variation in original items that was retained by extracted factors was low, but this is expected in large scale surveys due to variation in factor structure across survey types, countries, and demographic groups. It should be noted that for the religiosity/spirituality items, two separate factor analyses were performed: one for the first 7 items that were administered to students only and the second on all items that were administered to non-students. Similarly, separate analyses were performed for self-efficacy items administered to only administrators and teachers, and those administered to students.

A list of items flagged by confirmatory factor procedure is presented in Table 8. These items were removed prior to conducting reliability analysis. Item loadings for each factor analysis run based on remaining item pools are presented in Tables 9 through 15.

Table 6: Summary of administered scales by survey type.

Scale	Survey type				
	Administrator	Teacher	Parent	University Student	School Student
Community mindedness	✓•	✓•	✓•	✓•	x
Empathy	•	•	•	•	•
Perspective taking	✓•	✓•	✓•	✓•	✓•
Affective	✓•	✓•	✓•	✓•	✓•
Cognitive inclusion	✓•	✓•	✓•	✓•	✓•
Caring	✓•	✓•	✓•	✓•	✓•
Forgiveness	•	•	•	•	•
My attitudes	✓•	✓•	✓•	✓•	✓•
Decisions	✓•	✓•	✓•	✓•	✓•
Moral reasoning	•	•	•	•	•
Affective	✓•	✓•	✓•	✓•	✓•
Cognitive/Decisions	✓•	✓•	✓•	✓•	✓•
Religiosity/spirituality	✓•	✓•	✓•	✓•	✓•
Self-efficacy	•	•	•	•	•
Efficacy	✓•	✓•	x	x	x
Need satisfaction	✓•	✓•	x	x	x
Initiative	X	x	x	✓•	✓•
Effort	X	x	x	✓•	✓•
Persistence	X	x	x	✓•	✓•
Sense of belonging	•	•	•	•	•
Schooling	X	x	x	✓•	✓•
Social support	X	x	x	✓•	✓•
Relatedness	X	x	x	✓•	✓•

Table 7: Factor analysis summary.

Scale	n	KMO	Bartlett's test p value	No. of factors extracted	% of retained variation
Religiosity/spirituality, students only	11,332	0.93	< .001	1	67.6
Religiosity/spirituality, adults only	6,844	0.96	< .001	1	60.6
Empathy	18,513	0.93	< .001	4	34.6
Forgiveness	17,674	0.85	< .001	2	31.7
Moral reasoning	17,630	0.78	< .001	2	31.1
Community mindedness	11,645	0.89	< .001	1	40.1
Self-efficacy, adults only	1,525	0.93	< .001	2	41.1
Self-efficacy, students only	12,068	0.81	< .001	3	37.0
Sense of belonging	10,920	0.95	< .001	3	36.6

Note. KMO = Kaiser-Meyer-Olkin measure of sampling adequacy.

Table 8: List of items flagged by factor analysis.

Scale/subscale	Original number of items	Final number of items	Item(s) removed
Community mindedness	8	8	
Empathy	35	21	
Perspective taking	7	5	Q020105, Q020106
Affective	16	6	Q020201, Q020202, Q020204, Q020207, Q020209, Q020210, Q020211, Q020212, Q020214, Q020215
Cognitive inclusion	5	3	Q020304, Q020305
Caring	7	7	
Forgiveness	21	15	
My attitudes	12	8	Q030102, Q030103, Q030104, Q030106
Decisions	9	7	Q030205, Q030206
Moral reasoning	11	10	
Affective	5	5	
Cognitive/Decisions	6	5	Q040203
Religiosity/spirituality, all	7	7	
Religiosity/spirituality, adults only	17	17	
Self-efficacy, adults only	34	22	
Efficacy	13	10	Q060101, Q060102, Q060103
Need satisfaction	21	12	Q060203, Q060205, Q060207, Q060211, Q060214, Q060216, Q060218, Q060219, Q060220
Self-efficacy, students only	12	12	
Initiative	3	3	
Effort	5	5	
Persistence	4	4	
Sense of belonging	40	26	
Schooling	18	11	Q070102, Q070104, Q070105, Q070107, Q070108, Q070114, Q070118
Social support	11	9	Q070207, Q070209
Relatedness	6	11	Q070303, Q070306, Q070307, Q070310, Q070311

Note. Entries in bold indicate factor analysis runs. In both Tables above (7 & 8) “adults” in self-efficacy refers to teachers and administrators only.

Table 9: Factor loadings for community mindedness.

Item	Community mindedness
Q050101	0.56
Q050102	0.48
Q050103	0.70
Q050104	0.72
Q050105	0.71
Q050106	0.67
Q050107	0.59
Q050108	0.59

Table 10: Factor loadings for religiosity.

	Religiosity	
Item	School and university students	Administrators, teachers and parents
Q010101	0.86	0.76
Q010102	0.89	0.80
Q010103	0.83	0.74
Q010104	0.76	0.67
Q010105	0.82	0.73
Q010106	0.83	0.76
Q010107	0.77	0.74
Q010108	–	0.66
Q010109	–	0.69
Q010110	–	0.70
Q010111	–	0.73
Q010112	–	0.70
Q010113	–	0.75
Q010114	–	0.66
Q010115	–	0.65
Q010116	–	0.67
Q010117	–	0.64

Table 11: Factor loadings for forgiveness.

	Forgiveness	
Item	Decisions	My attitudes
Q030101	0.17	**0.46**
Q030105	0.15	**0.37**
Q030107	0.14	**0.52**
Q030108	0.00	**0.42**
Q030109	0.07	**0.52**
Q030110	0.00	**0.41**
Q030111	0.06	**0.63**
Q030112	0.13	**0.65**
Q030201	**0.42**	0.17
Q030202	**0.55**	0.08
Q030203	**0.67**	0.10
Q030204	**0.62**	0.11
Q030207	**0.58**	0.06
Q030208	**0.69**	0.06
Q030209	**0.66**	0.09

Table 12: Factor loadings for empathy.

	Empathy			
Item	Caring	Affective	Perspective taking	Cognitive inclusion
Q020101	0.07	0.30	**0.47**	0.14
Q020102	0.08	0.30	**0.48**	0.17
Q020103	0.19	0.03	**0.61**	0.12
Q020104	0.19	0.11	**0.61**	0.13
Q020107	0.13	0.29	**0.39**	0.18
Q020203	0.02	**0.37**	0.22	0.19
Q020205	0.17	**0.50**	0.27	0.15
Q020206	0.15	**0.35**	0.26	0.21
Q020208	0.13	**0.36**	0.21	0.17
Q020213	0.26	**0.40**	0.21	0.18
Q020216	0.12	**0.36**	0.13	0.29
Q020301	0.22	0.06	0.14	**0.53**
Q020302	0.17	0.09	0.11	**0.60**
Q020303	0.05	0.13	0.09	**0.44**
Q020401	0.40	**0.43**	0.16	0.20
Q020402	**0.57**	0.27	0.11	0.10
Q020403	**0.51**	0.43	0.15	0.18
Q020404	**0.53**	0.37	0.16	0.18
Q020405	**0.54**	-0.16	0.10	0.15
Q020406	**0.49**	0.08	0.15	0.21
Q020407	**0.45**	0.29	0.20	0.21

Table 13: Factor loadings for moral reasoning.

	Moral reasoning	
Item	Cognitive/decisions	Affective
Q040101	0.08	**0.48**
Q040102	0.07	**0.37**
Q040103	0.04	**0.59**
Q040104	0.03	**0.50**
Q040105	0.08	**0.45**
Q040201	**0.57**	0.08
Q040202	**0.38**	0.18
Q040204	**0.64**	0.03
Q040205	**0.70**	0.06
Q040206	**0.72**	0.06

Table 14: Factor loadings for self-efficacy.

	Self-efficacy				
Item	Efficacy	Need satisfaction	Effort	Persistence	Initiative
Q060104	**0.68**	0.19	–	–	–
Q060105	**0.55**	0.20	–	–	–
Q060106	**0.69**	0.15	–	–	–
Q060107	**0.71**	0.19	–	–	–
Q060108	**0.41**	0.14	–	–	–
Q060109	**0.72**	0.23	–	–	–
Q060110	**0.69**	0.21	–	–	–
Q060111	**0.75**	0.14	–	–	–
Q060112	**0.73**	0.15	–	–	–
Q060113	**0.67**	0.21	–	–	–
Q060201	0.25	**0.43**	–	–	–
Q060202	0.24	**0.59**	–	–	–
Q060204	0.16	**0.46**	–	–	–
Q060206	0.13	**0.59**	–	–	–
Q060208	0.19	**0.59**	–	–	–
Q060209	0.20	**0.67**	–	–	–
Q060210	0.25	**0.63**	–	–	–
Q060212	0.20	**0.54**	–	–	–
Q060213	0.15	**0.56**	–	–	–
Q060215	0.19	**0.63**	–	–	–
Q060217	0.03	**0.48**	–	–	–
Q060221	0.08	**0.56**	–	–	–
Q060301	–	–	-0.05	0.20	**0.50**
Q060302	–	–	0.06	0.22	**0.72**
Q060303	–	–	0.14	0.32	**0.59**
Q060401	–	–	**0.55**	0.11	-0.04
Q060402	–	–	**0.53**	-0.02	0.07
Q060403	–	–	**0.37**	-0.05	-0.08
Q060404	–	–	**0.64**	0.01	0.09
Q060405	–	–	**0.62**	0.04	0.14
Q060501	–	–	-0.09	**0.49**	0.20
Q060502	–	–	0.01	**0.71**	0.17
Q060503	–	–	0.06	**0.57**	0.26
Q060504	–	–	0.07	**0.51**	0.20

Table 15: Factor loadings for sense of belonging.

	Sense of belonging		
Item	Social support	Schooling	Relatedness
Q070101	0.23	**0.50**	0.20
Q070103	0.19	**0.44**	0.23
Q070106	0.15	**0.45**	0.17
Q070109	0.21	**0.48**	0.30
Q070110	0.15	**0.54**	0.21
Q070111	0.10	**0.61**	0.07
Q070112	0.23	**0.43**	0.15
Q070113	0.23	**0.52**	0.29
Q070115	0.12	**0.52**	0.10
Q070116	0.10	**0.35**	0.25
Q070117	0.24	**0.56**	0.22
Q070201	**0.66**	0.20	0.14
Q070202	**0.57**	0.23	0.28
Q070203	**0.72**	0.23	0.12
Q070204	**0.58**	0.27	0.24
Q070205	**0.52**	0.25	0.27
Q070206	**0.46**	0.15	0.37
Q070208	**0.43**	0.11	0.36
Q070210	**0.57**	0.10	0.34
Q070211	**0.44**	0.13	0.54
Q070301	0.32	0.15	**0.61**
Q070302	0.22	0.22	**0.50**
Q070304	0.14	0.18	**0.42**
Q070305	0.34	0.21	**0.48**
Q070308	0.21	0.26	**0.46**
Q070309	0.07	0.13	**0.33**

Reliability Analysis

Once the scale composition was finalized, Cronbach's alpha was computed for each individual scale and its corresponding subscales. Reliabilities were not computed if any of the following conditions occurred:

1. More than 20% of the relevant cases were not used in reliability calculation due to missing values. This was to ensure that computed reliability estimates were reflective of their target populations.
2. The number of cases available for reliability computation was less than 10 times the number of items in reliability calculation. This was necessary for robust Cronbach's alpha estimates.
3. A scale was not administered in its original form in a country (e.g. it had a smaller number of items). This was necessary to ensure valid comparison of reliability estimates across countries.

In addition to the above filters, any problematic items identified by the factor analysis procedure (as summarized in Table 8) were dropped from reliability analysis. Reliability estimates for scales and subscales are presented by country in Table 16 and by survey type in Table 17. At first glance, many constructs seem to suffer from low reliability. However, a closer inspection of the reliability pattern suggests that the issues lie in subscales and that scales in general have adequate reliability values (Cronbach's alpha > 0.7). The only exception is moral reasoning, which has reliability values consistently below 0.7.

A close examination of questions eliminated by factor analysis and the pattern of low reliabilities in Tables 15 and 16 (where generally subscale reliabilities are below par but overall scale reliabilities are not) suggest two possible issues: translation issues in the questionnaire, or inability of survey respondents to differentiate between subscales. When we consider that many of the constructs used in this study were actually developed for very different populations (generally those from North America or Western Europe), then it is easy to see why the scales did not perform very well at the finer subscale level in countries that are mostly located in Africa, the Middle East, and Central Asia. This notion is further supported when we observe that overall reliability values presented in Tables 15 and 16 generally either exceed the 0.7 threshold or are borderline shy of it (see Figure 18). Therefore, as a general recommendation, we suggest that statistical modeling be conducted at the scale level and that subscale-level analysis should be ignored or limited to only those subscales that exhibit adequate reliability.

Table 16: Scale and subscale reliability estimates by country.

Scale	Overall sample	Azerbaijan	Bangladesh	Bosnia	India	Indonesia	Kenya	Kyrgyzstan	Malaysia	Mauritius	Palestine	Sudan	Tanzania	Tatarstan	Uganda
Community mindedness	**0.84**	–	**0.79**	**0.85**	**0.83**	**0.74**	**0.85**	**0.84**	**0.85**	**0.87**	–	**0.80**	–	**0.79**	**0.86**
Empathy	**0.87**	–	**0.84**	**0.88**	**0.88**	**0.77**	**0.86**	**0.84**	**0.84**	**0.86**	–	–	–	**0.87**	–
Perspective taking	0.72	0.80	0.65	0.75	0.77	0.68	0.67	0.74	0.70	0.74	–	0.70	0.61	0.77	0.71
Affective	0.68	–	0.64	0.75	0.67	0.42	0.60	0.62	0.72	0.68	–	0.64	0.70	0.74	–
Cognitive inclusion	0.57	–	0.39	0.67	0.64	0.48	0.59	0.57	0.45	0.57	–	0.60	0.49	0.54	0.64
Caring	0.78	0.80	0.72	0.77	0.78	0.74	0.82	0.80	0.74	0.77	–	0.75	0.75	0.81	0.80
Forgiveness	**0.78**	–	**0.70**	**0.73**	**0.78**	**0.75**	**0.78**	**0.79**	**0.75**	**0.79**	–	–	–	**0.72**	–
My attitudes	0.72	–	0.73	0.66	0.76	0.65	0.70	0.72	0.67	0.69	–	0.67	0.77	0.66	–
Decisions	0.80	–	0.65	0.76	0.83	0.78	0.83	0.82	0.79	0.83	–	–	0.80	0.73	0.86
Moral reasoning	**0.68**	–	**0.62**	**0.68**	**0.72**	**0.60**	**0.61**	**0.68**	**0.61**	**0.68**	–	–	–	**0.64**	–
Affective	0.59	–	0.67	0.59	0.73	0.49	0.38	0.62	0.45	0.53	–	0.59	0.46	0.57	0.63
Cognitive/Decisions	0.74	–	0.55	0.72	0.77	0.73	0.77	0.76	0.74	0.77	–	–	0.81	0.64	0.77
Religiosity/spirituality, all	**0.93**	**0.80**	**0.83**	**0.94**	**0.85**	**0.76**	**0.84**	**0.89**	**0.91**	**0.94**	–	–	**0.86**	**0.94**	**0.88**
Religiosity/spirituality, adults only	**0.91**	–	**0.84**	**0.94**	**0.85**	**0.77**	**0.84**	**0.91**	**0.91**	**0.92**	–	–	–	**0.93**	**0.82**
Self-efficacy, adults only	**0.90**	–	**0.81**	**0.91**	**0.88**	–	–	**0.89**	**0.91**	**0.92**	**0.88**	–	–	**0.90**	–
Efficacy	0.89	–	0.76	0.88	0.82	0.83	0.86	–	0.89	0.91	–	–	–	0.89	–
Need satisfaction	0.86	–	0.79	–	0.85	–	0.87	–	0.86	0.88	–	–	–	0.90	–
Self-efficacy, students only	**0.70**	–	**0.58**	**0.81**	**0.68**	**0.71**	**0.75**	**0.74**	**0.78**	**0.76**	–	–	**0.54**	**0.81**	–
Initiative	0.69	0.58	0.63	0.79	0.68	0.61	0.65	0.68	0.64	0.63	–	0.64	0.55	0.75	0.74
Effort	0.67	0.55	0.60	0.78	0.71	0.73	0.60	0.69	0.72	0.73	–	0.42	0.61	0.72	0.64
Persistence	0.69	0.50	0.50	0.79	0.66	0.69	0.73	0.74	0.72	0.75	–	0.66	0.68	0.75	0.74
Sense of belonging	**0.91**	–	–	**0.92**	**0.90**	**0.88**	–	**0.90**	**0.91**	**0.92**	–	–	**0.89**	**0.91**	–
Schooling	0.83	–	0.81	0.86	0.81	0.77	0.78	0.81	0.83	0.85	–	–	0.75	0.82	–
Social support	0.86	–	0.83	0.89	0.85	0.84	0.81	0.86	0.87	0.88	–	0.82	0.87	0.87	0.82
Relatedness	0.71	–	0.68	0.76	0.68	0.63	0.73	0.69	0.72	0.73	–	0.71	0.64	0.75	0.71

Note. **Numbers shown in bold are for the overall scale. Blue font indicates reliabilities below 0.7 but above 0.6. Red font indicates reliabilities less than 0.6.**

Table 17: Scale and subscale reliability estimates by survey type.

Scale	Overall sample	Administrator	Teacher	Parent	University student	School student
Community mindedness	**0.84**	**0.88**	**0.86**	**0.83**	**0.84**	**N/A**
Empathy	**0.87**	**–**	**–**	**0.87**	**0.86**	**0.86**
Perspective taking	0.72	0.78	0.78	0.75	0.71	0.69
Affective	0.68	0.63	0.68	0.69	0.67	0.68
Cognitive inclusion	0.57	0.63	0.65	0.58	0.57	0.55
Caring	0.78	0.81	0.77	0.77	0.77	0.79
Forgiveness	**0.78**	**0.81**	**0.78**	**0.77**	**0.80**	**0.78**
My attitudes	0.72	0.75	0.69	0.74	0.70	0.72
Decisions	0.80	0.85	0.83	0.80	0.82	0.79
Moral reasoning	**0.68**	**–**	**–**	**0.70**	**0.67**	**0.68**
Affective	0.59	0.60	0.57	0.63	0.57	0.59
Cognitive/Decisions	0.74	0.77	0.78	0.74	0.74	0.73
Religiosity/spirituality, all	**0.93**	**0.91**	**0.94**	**0.91**	**0.94**	**0.93**
Religiosity/spirituality, adults only	**0.91**	**0.92**	**0.94**	**0.90**	**N/A**	**N/A**
Self-efficacy, adults only	**0.90**	**0.89**	**0.91**	**N/A**	**N/A**	**N/A**
Efficacy	0.89	0.90	0.89	N/A	N/A	N/A
Need satisfaction	0.86	0.84	0.87	N/A	N/A	N/A
Self-efficacy, students only	**0.70**	**N/A**	**N/A**	**N/A**	**0.75**	**0.68**
Initiative	0.69	N/A	N/A	N/A	0.74	0.66
Effort	0.67	N/A	N/A	N/A	0.70	0.65
Persistence	0.70	N/A	N/A	N/A	0.76	0.66
Sense of belonging	**0.91**	**N/A**	**N/A**	**N/A**	**0.91**	**0.91**
Schooling	0.83	N/A	N/A	N/A	0.82	0.83
Social support	0.86	N/A	N/A	N/A	0.88	0.86
Relatedness	0.71	N/A	N/A	N/A	0.72	0.70

Note. **Numbers shown in bold are for the overall scale. Blue font indicates reliabilities below 0.7 but above 0.6. Red font indicates reliabilities less than 0.6. N/A = not applicable due to scale not administered. In both Tables (16 and 17) in The Self-efficacy scale, adults refers to teachers and administrators.**

Scale/Subscale Descriptives

For each scale and subscale, the underlying items were averaged to form scale scores. For each scale/subscale, missing values were replaced by its mean. Summary statistics for all scale scores are presented in Table 18. Further breakup of scale means by survey type and country is presented in Tables 19 and 20, with corresponding visualization in Figures 19 and 20.

Table 18: Summary statistics for scale and subscales.

Scale	*n*	*Min*	*Max*	*Mean*	*SD*
Community mindedness	12,671	1	5	3.78	0.69
Empathy	21,626	1	5	3.87	0.54
Perspective taking	21,626	1	5	3.95	0.69
Affective	21,626	1	5	3.99	0.65
Cognitive inclusion	21,626	1	5	3.59	0.84
Caring	21,626	1	5	3.82	0.68
Forgiveness	21,626	1	5	3.44	0.58
My attitudes	21,626	1	5	3.83	0.64
Decisions	21,626	1	5	2.99	0.83
Moral reasoning	21,626	1	5	3.63	0.61
Affective	21,626	1	5	4.01	0.70
Cognitive/Decisions	21,626	1	5	3.23	0.88
Religiosity/spirituality	21,626	1	5	4.10	0.91
Self-efficacy	15,534	1	5	3.60	0.58
Efficacy	2,174	1	5	3.89	0.71
Need satisfaction	2,174	1	5	3.92	0.52
Initiative	13,360	1	5	3.54	0.92
Effort	13,360	1	5	3.74	0.74
Persistence	13,360	1	5	3.31	0.88
Sense of belonging	13,360	1	5	3.77	0.57
Schooling	13,360	1	5	3.59	0.65
Social support	13,360	1	5	3.99	0.70
Relatedness	13,360	1	5	3.80	0.65

Figure 18: Deviations of scale and subscale means from average for all scales (M = 3.71) in the overall sample. Dark shade represents scales, light shade represents subscales. The red line indicates Likert scale mid-point of 3.

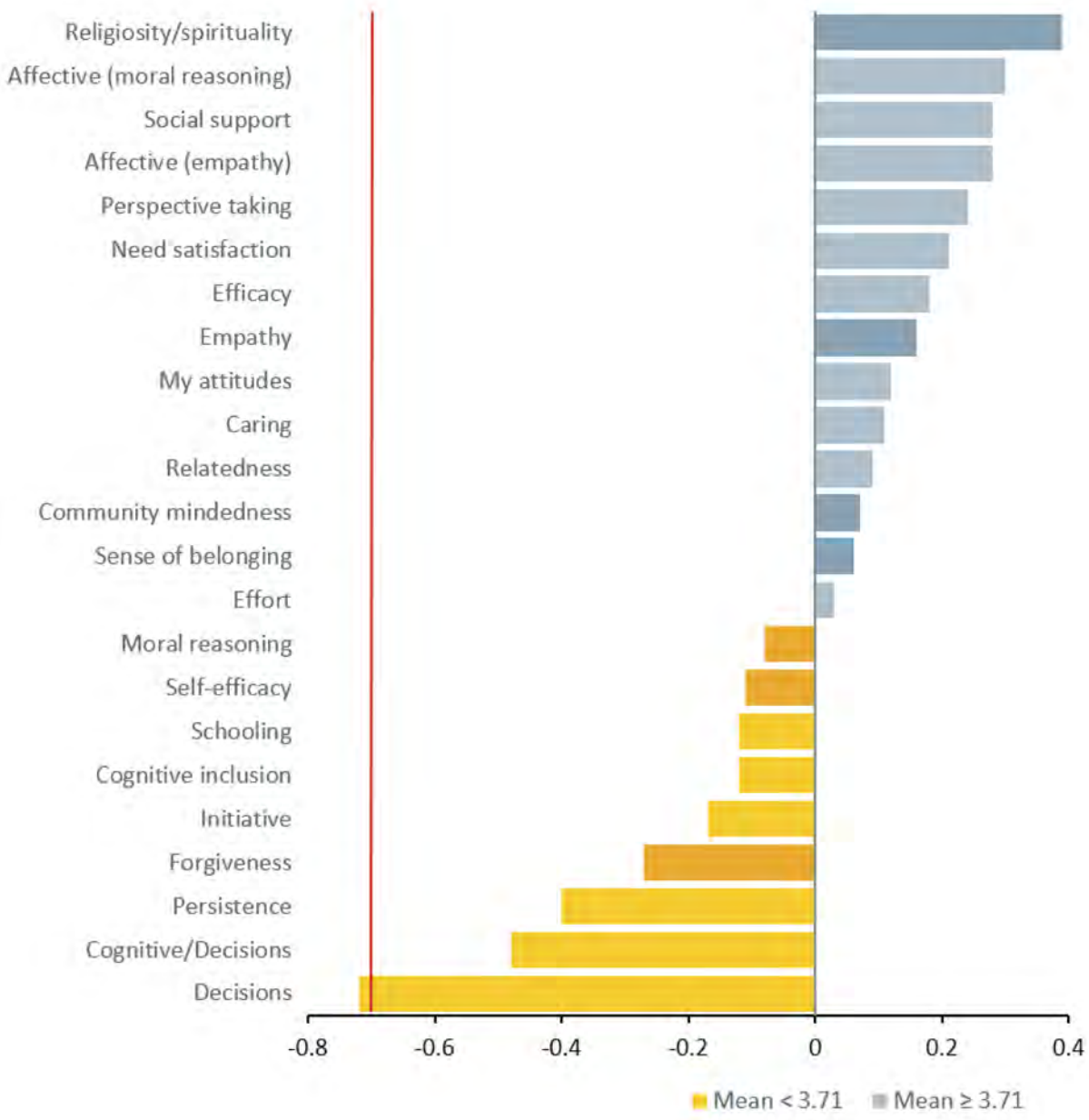


Table 19: Scale means by survey type.

Scale	Survey type				
	Administrator	Teacher	Parent	University student	School student
Community mindedness	3.96	3.87	3.80	3.69	–
Empathy	3.99	4.00	3.85	3.91	3.83
Perspective taking	4.10	4.07	3.93	3.99	3.91
Affective	4.12	4.13	3.93	4.05	3.98
Cognitive inclusion	3.76	3.81	3.63	3.62	3.51
Caring	3.90	3.92	3.82	3.85	3.77
Forgiveness	3.58	3.52	3.48	3.42	3.39
My attitudes	3.91	3.92	3.87	3.78	3.80
Decisions	3.22	3.07	3.04	3.01	2.92
Moral reasoning	3.75	3.78	3.66	3.66	3.55
Affective	4.09	4.10	4.05	3.98	3.98
Cognitive/Decisions	3.40	3.44	3.26	3.34	3.11
Religiosity/spirituality	4.16	4.02	4.02	4.09	4.18
Self-efficacy	4.00	3.89	–	3.57	3.53
Efficacy	3.97	3.86	–	–	–
Need satisfaction	4.00	3.89	–	–	–
Initiative	–	–	–	3.55	3.54
Effort	–	–	–	3.72	3.75
Persistence	–	–	–	3.40	3.26
Sense of belonging	–	–	–	3.81	3.76
Schooling	–	–	–	3.58	3.59
Social support	–	–	–	4.06	3.95
Relatedness	–	–	–	3.86	3.77

Note. "–" indicates that the scale was not administered.

Figure 19: Scale means by survey type. Community mindedness, self-efficacy, and sense of belonging were not administered to all groups.

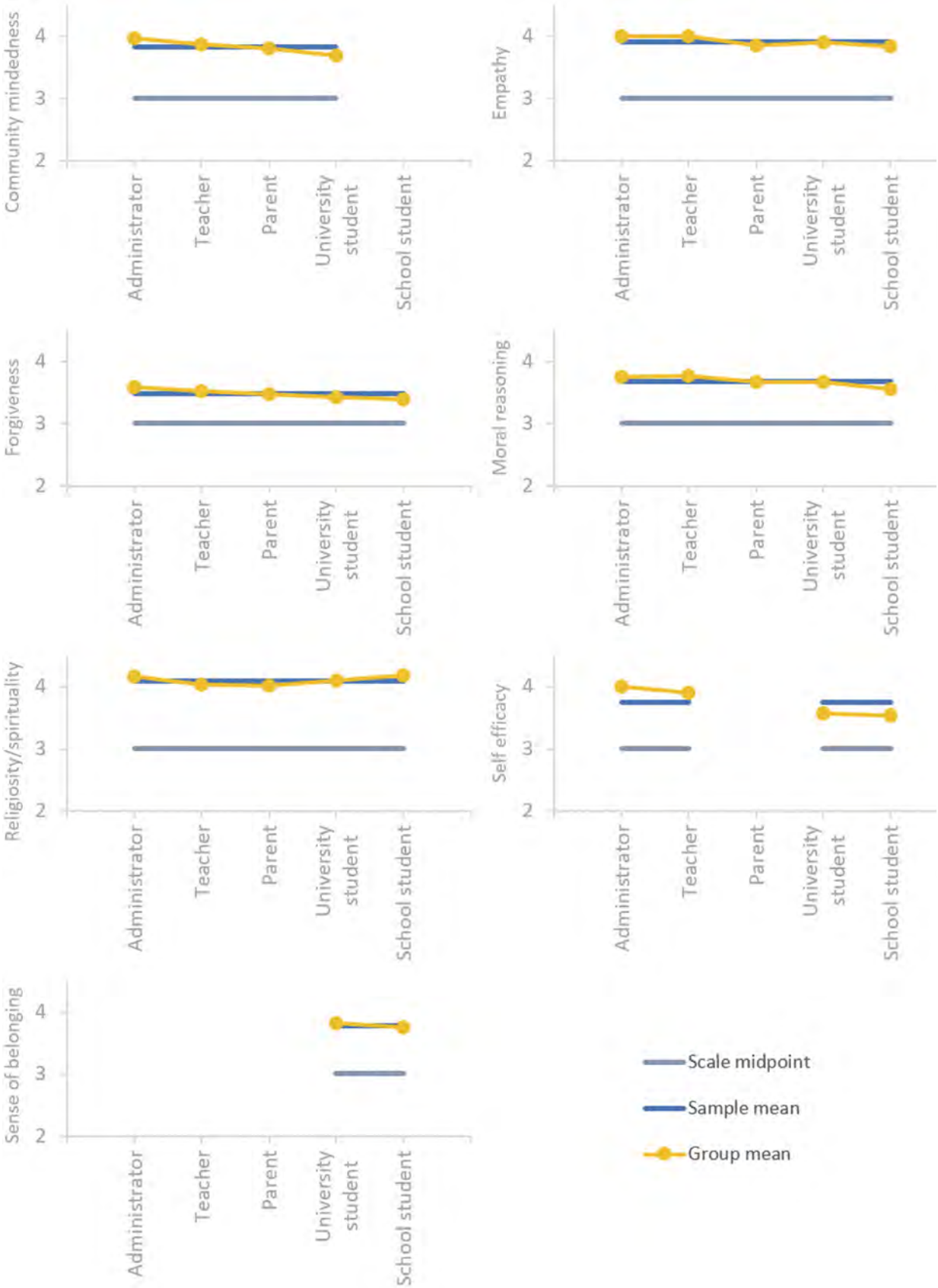
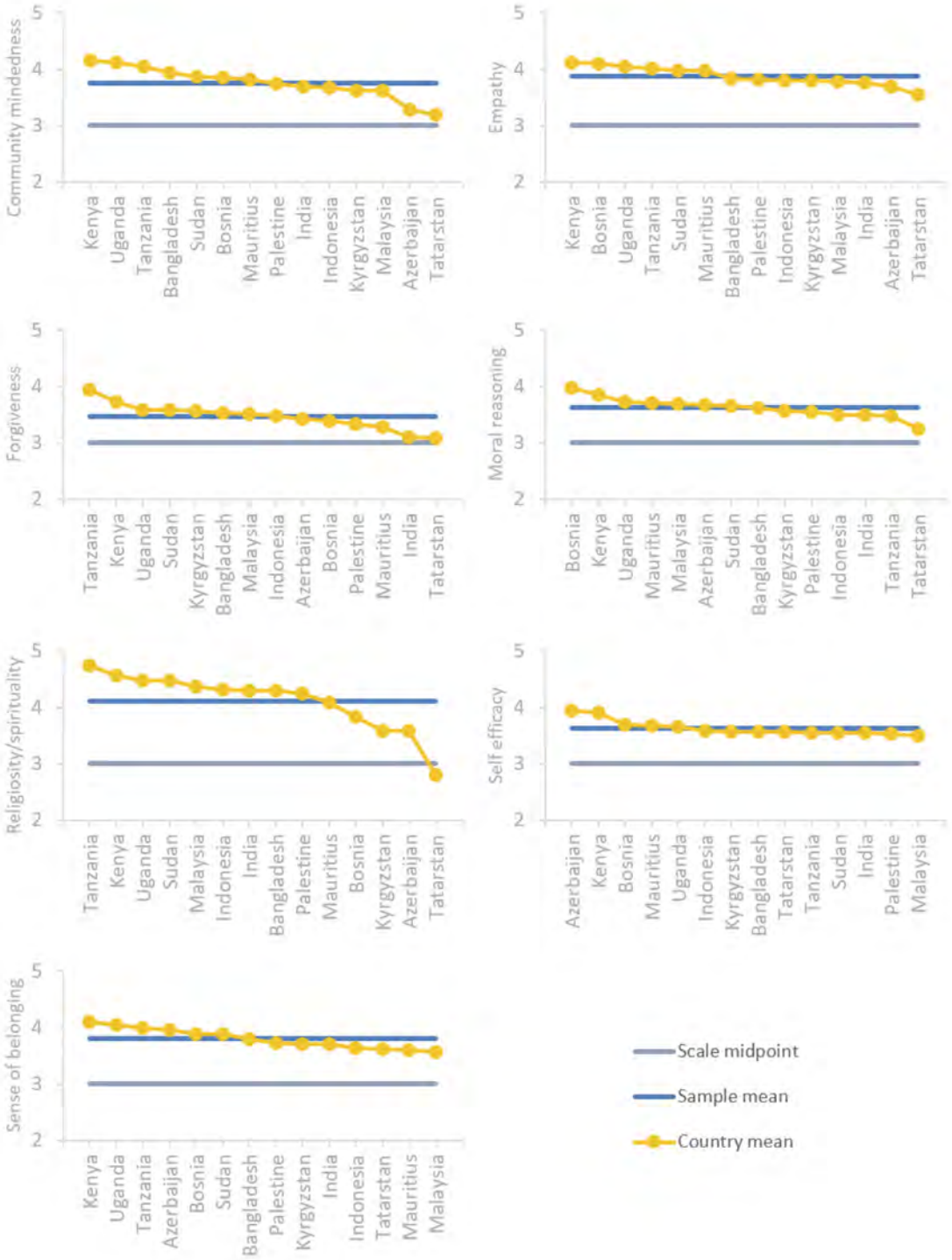


Table 20: Scale means by country.

Scale	Azerbaijan	Bangladesh	Bosnia	India	Indonesia	Kenya	Kyrgyzstan	Malaysia	Mauritius	Palestine	Sudan	Tanzania	Tatarstan	Uganda
Community mindedness	3.28	3.94	3.85	3.70	3.68	4.15	3.62	3.62	3.81	3.75	3.87	4.04	3.19	4.11
Empathy	3.68	3.82	4.09	3.76	3.80	4.12	3.79	3.79	3.97	3.81	3.98	4.00	3.55	4.04
Perspective taking	3.80	3.90	4.12	3.83	3.81	4.17	4.01	3.97	4.08	3.84	3.98	3.94	3.70	4.10
Affective	3.56	3.83	4.30	3.79	3.92	4.22	3.96	4.06	4.08	4.02	4.04	4.22	3.73	4.06
Cognitive inclusion	3.37	3.63	3.88	3.64	3.56	3.94	3.12	3.42	3.84	3.55	3.51	3.58	3.27	3.87
Caring	3.78	3.85	3.99	3.75	3.79	4.05	3.76	3.57	3.84	3.73	4.11	4.04	3.42	4.04
Forgiveness	3.43	3.52	3.38	3.09	3.48	3.73	3.56	3.51	3.28	3.34	3.58	3.94	3.08	3.58
My attitudes	3.66	3.89	3.77	3.67	3.89	4.20	3.88	3.82	3.84	3.67	4.00	4.11	3.41	3.99
Decisions	2.98	3.11	2.94	2.43	3.01	3.21	3.20	3.16	2.68	2.92	3.04	3.74	2.70	3.13
Moral reasoning	3.66	3.61	3.97	3.49	3.50	3.85	3.56	3.69	3.70	3.55	3.65	3.47	3.24	3.72
Affective	3.96	4.03	4.14	3.94	4.12	4.12	4.09	3.97	3.98	4.03	4.22	3.79	3.66	4.09
Cognitive/Decisions	3.10	3.19	3.81	3.04	2.88	3.58	3.04	3.41	3.43	2.98	2.93	3.16	2.81	3.32
Religiosity/spirituality	3.58	4.29	3.83	4.29	4.32	4.56	3.58	4.36	4.08	4.24	4.47	4.74	2.81	4.48
Self-efficacy	3.94	3.56	3.68	3.54	3.58	3.90	3.57	3.49	3.67	3.53	3.54	3.55	3.55	3.65
Efficacy	4.16	4.04	3.45	4.20	3.83	4.33	3.64	3.92	3.72	4.15	4.44	4.38	3.03	4.08
Need satisfaction	3.76	3.92	3.79	3.94	3.95	4.16	3.90	3.93	3.75	4.13	4.13	3.90	3.74	4.02
Initiative	4.17	3.61	3.69	3.42	3.23	3.68	3.64	3.36	3.65	3.70	3.37	3.28	3.70	3.17
Effort	3.96	3.80	3.75	3.83	3.68	4.19	3.71	3.67	3.85	3.42	3.53	3.78	3.49	4.09
Persistence	3.64	3.02	3.63	3.13	3.26	3.49	3.32	3.18	3.42	3.44	3.25	3.10	3.57	2.97
Sense of belonging	3.95	3.79	3.89	3.71	3.63	4.09	3.71	3.57	3.60	3.73	3.88	4.00	3.61	4.05
Schooling	3.83	3.71	3.54	3.59	3.41	3.99	3.44	3.37	3.40	3.59	3.81	3.84	3.34	3.97
Social support	4.21	3.90	4.21	3.92	3.86	4.28	4.00	3.76	3.80	3.89	4.00	4.30	3.84	4.16
Relatedness	3.80	3.76	4.04	3.63	3.70	3.96	3.78	3.65	3.72	3.74	3.83	3.83	3.78	4.01

Figure 20: Scale means by country.



Path Analysis

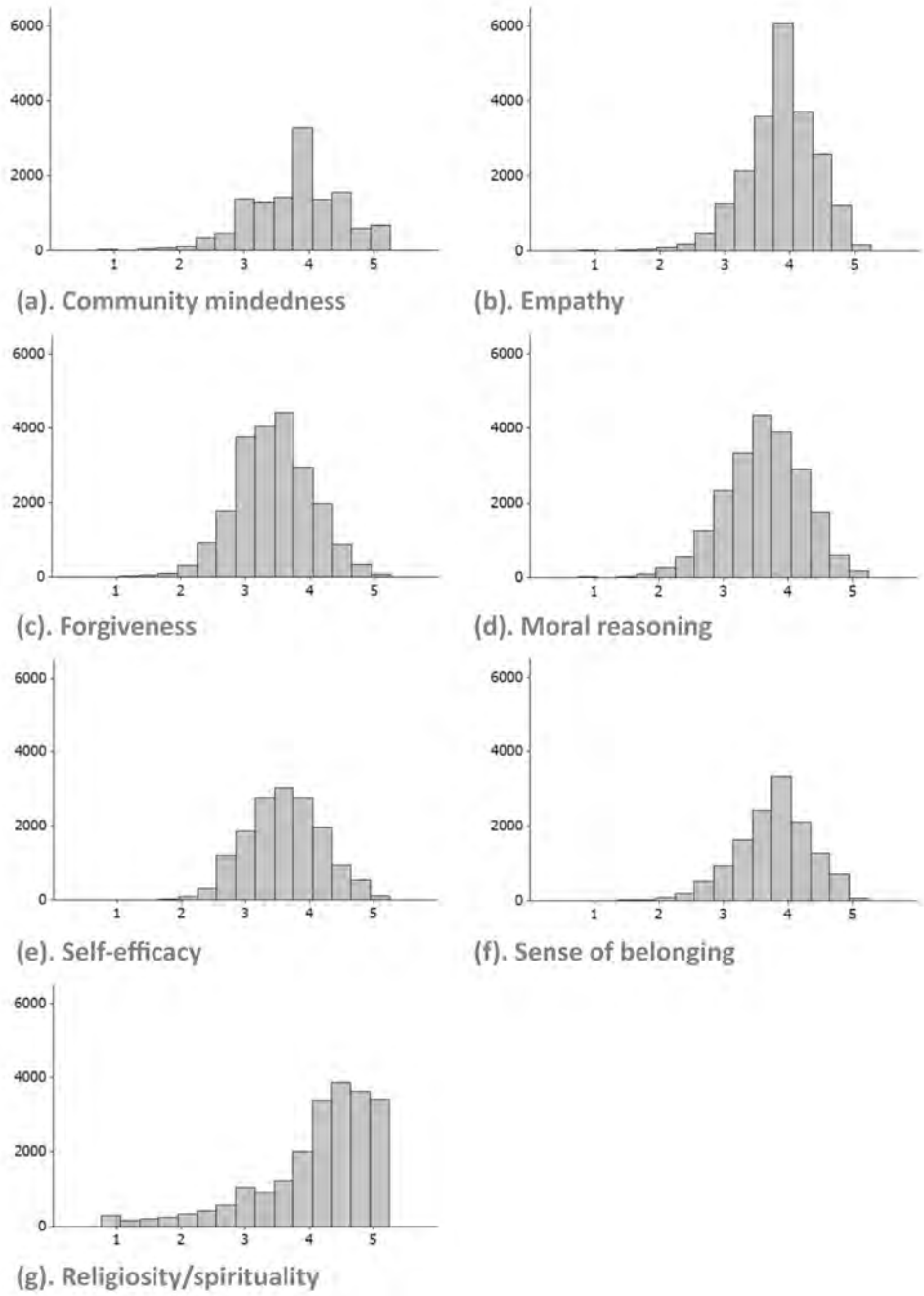
We constructed scale scores based on item means. The correlation matrix of item mean-based scales is presented in Table 21. Histograms of scales are presented in Figure 21.

Table 21: Scale correlations.

	Pearson correlation, r						
Scale	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1. Community mindedness	–						
2. Empathy	.56***	–					
3. Forgiveness	.40***	.51***	–				
4. Moral reasoning	.40***	.51***	.42***	–			
5. Self-efficacy	.32***	.32***	.15***	.19***	–		
6. Sense of belonging	.50***	.51***	.39***	.38***	.34***	–	
7. Religiosity/Spirituality	.36***	.33***	.34***	.29***	.10***	.26***	–

*$p < .05$, **$p < .01$, ***$p < .00$

Figure 21: Distribution of scales in the full sample.



Multiple regression results for predicting community mindedness and forgiveness are summarized in Tables 22 through 26. Caution should be taken when comparing results within each table because results are aggregated over countries. When comparing results across tables, keep in mind that depending on actual group sizes, categories of some variables were either merged or dropped altogether in order to avoid small cell sizes which is problematic in mean comparison procedures. The criterion was to have a minimum of 20 observations per group in order to have reliable estimates. In addition to variation in number of groups, the regression models for each survey population group are based

on scales administered to that group. For example, community mindedness is not an outcome in the school student regression models because this scale was not administered to this survey group. Similarly, sense of belonging only appears in regression models for school and university students because this scale was not administered to adult survey respondents.

All scales were standardized as z scores before inclusion in regression models. Thus, a one-unit change in the standardized variable represents a one standard deviation change. Since we had generally large sample sizes, even small effect sizes are expected to be statistically significant, at 0.05 level of significance. For this reason, we have concentrated on only highly significant variables ($p < .001$) in our interpretation of regression results. Finally, since we generally found no pattern and little statistical significance in interaction effects, for the sake of brevity these have been omitted from the presented results.

For each survey group, two multiple regression models were estimated for each outcome. The first of these predicted the outcome variable from demographic factors (hereafter referred to as the base model) while the second model (hereafter referred to as the enhanced model) augmented the first model by adding scale predictors. For administrators, gender was the only highly significant predictor in the base model predicting community mindedness, suggesting that on average community mindedness of male administrators was about half a standard deviation higher than that of their female counterparts ($B = 0.46$, $p < .001$). This effect was slightly reduced but remained statistically significant in the enhanced model ($B = 0.32$, $p < .001$). The enhanced model also identified two significant scale predictors. While holding all else constant, a 1 SD increase in empathy raised community mindedness by 0.40 SD ($p < .01$). A similar increase in self-efficacy raised community mindedness by 0.29 SD. The enhanced model explained about 41% of the total variation (large effect) in community mindedness. This figure compares to only 11% in the base model.

Prediction results for forgiveness suggested that empathy, moral reasoning, and self-efficacy are significant predictors in administrators, $p < .001$. The proportion of explained variation in this model was 32% (relative to 3% in the base model) and thus represents a large effect (Cohen, 1992).

Multiple regression results for teachers were only slightly different from those for administrators and suggested that in addition to a gender effect favoring males there was a significant difference in community mindedness between professional degree holders and the master's or higher education category. The magnitude of this difference was 0.6 SD in favor of the latter group. Results from the enhanced model identified empathy, religiosity/spirituality, and self-efficacy as significant predictors of community mindedness, $p < .001$.

For forgiveness, number of children had a positive effect on forgiveness ($B = 0.09$, $p < .001$) in the base model but not in the enhanced model. In the enhanced model, all four-scale predictors were found to be highly statistically significant, $p < .001$. For teachers, the total proportion of explained variation in the enhanced model was 44% for community mindedness and 31% for forgiveness (both classified as large effects based on Cohen's [1992] guidelines).

For parents, in the base model community mindedness was significantly lower for professional degree holders than for the master's or higher education group ($B = 0.43$, $p < .01$). In addition, Muslim parents on average reported a higher level of community mindedness compared to their non-Muslim and non-Christian counterparts ($B = 0.25$, $p < .001$). When scale variables were added to this model, the effect of education weakened but persisted while that of religion disappeared. In addition, the enhanced model identified empathy, moral reasoning, and religiosity/spirituality as strong predictors of community mindedness, $p < .001$.

For forgiveness, in addition to the three scale variables being significant ($p < .001$), the effect of education was also significant. Specifically, mean forgiveness of the less than high school education group was 0.17 SD higher than the mean forgiveness of the master's or higher education group, $p < .001$. The base model also suggested a mean difference in forgiveness between high school and master's or higher education group. However, this difference did not persist when scale predictors were added

to enhance the base model. For parents, the total proportion of explained variation was 45% for community mindedness and 35% for forgiveness (both classified as large effects based on Cohen's [1992] guidelines).

Among university students, females on average reported lower community mindedness in both base and enhanced models; both Christians and Muslims reported higher mean community mindedness compared to non-Muslim and non-Christian students; and the enhanced model identified all scale variables except for self-efficacy as significant predictors of community mindedness, $p < .001$. For forgiveness, there was a persistent age effect in favor of older individuals (base model: $B = 0.91$, $p < .001$; enhanced model: $B = 0.75$, $p < .001$), and all five scale predictors were found to be highly significant, $p < .001$. However, the effect of self-efficacy on forgiveness turned out to be negative, suggesting that 1 SD increase in self-efficacy lowered forgiveness by 0.13 SD among university students, $p < .001$. This is interesting because for teachers and administrators, this effect was positive. Although one is cautioned against reading too much into this result because the effect size was small (< 0.2 SD), it does suggest that self-efficacy's effect on forgiveness differs between younger and older individuals. This notion is further strengthened by observation of a small but highly significant and negative effect of self-efficacy on forgiveness among school students ($B = -0.05$, $p < .001$). For university students, the total proportion of explained variation was 38% for community mindedness and 34% for forgiveness (both classified as large effects based on Cohen's [1992] guidelines).

For school students, significant effect of gender on forgiveness was observed in the base model but it did not persist in the enhanced model. The effect of grade on forgiveness was significant in both models, with estimates from the enhanced model suggesting that relative to Grade 12, this effect decreased consistently as grade level increased. Muslim school students reported a significantly higher mean forgiveness level relative to non-Muslim and non-Christian group ($B = 0.18$, $p < .001$). Finally, all five scale variables were significant for school students with the effect of self-efficacy being small but negative (a similar effect was observed for university students as pointed out earlier). The total proportion of explained variation in forgiveness was 34% (classified as large effect based on Cohen's [1992] guidelines).

The main takeaway from multiple regression results is that in general, scale variables such as empathy, moral reasoning, religiosity/spirituality, self-efficacy, and sense of belonging have strong prediction relationships with both community mindedness and forgiveness. The pattern of unadjusted correlations presented earlier in Table 21 was thus validated by multiple regression results.

Table 22: Multiple regression results for administrators.

	Community mindedness		Forgiveness	
Predictor	**Model 1**	**Model 2**	**Model 1**	**Model 2**
Intercept	-0.30	-0.09	-0.37	0.04
Gender				
Female	-0.46***	-0.32***	-0.16	-0.02
Male (reference)				
Age				
18-24	0.85*	0.53	0.29	-0.07
25-34	0.68**	0.46*	0.30	0.03
35-44	0.38	0.28	0.25	0.13
45-54	0.06	0.02	0.26	0.20
55-64 (reference)				
Marital status				
Single, never married	-0.04	-0.07	0.27	0.25
Married, living together (reference)				
Education				
High school	-0.44*	-0.32	0.12	0.19
Some college	0.10	0.01	0.18	0.04
Bachelor's	-0.24*	-0.29**	0.07	-0.02
Professional degree	-0.16	-0.09	-0.36	-0.17
Master's or higher (reference)				
Religion				
Christian	0.56*	0.12	0.34	-0.16
Muslim	0.28	-0.08	0.11	
Other (reference)				
Number of children	0.02	-0.02	0.09**	0.04
Experience	0.02*	0.02*	0.01	< 0.01
Tenure	-0.01	< 0.01	-0.01	< 0.01
Empathy		0.40***		0.36***
Moral reasoning		0.14**		0.19***
Religiosity/spirituality		< 0.01		0.18**
Self-efficacy		0.29***		0.20***
Adjusted R^2	0.11	0.41	0.03	0.32
R^2	0.14	0.44	0.07	0.35

Note. $n = 385$. $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$. Numbers reported are beta estimates. Model 1 includes demographic controls only.

Table 23: Multiple regression results for teachers.

	Community mindedness		Forgiveness	
Predictor	**Model 1**	**Model 2**	**Model 1**	**Model 2**
Intercept	0.39	0.28	-0.23	-0.27
Gender				
Female	-0.20***	-0.20***	-0.11*	-0.10*
Male (reference)				
Age				
18-24	0.42*	0.15	0.42*	0.25
25-34	0.14	-0.02	0.23	0.14
35-44	0.08	0.02	0.05	0.03
45-54	-0.14	-0.14	0.11	0.14
55-64 (reference)				
Marital status				
Single, never married	-0.44*	-0.33*	0.01	0.10
Married, living together	-0.41*	-0.30	0.06	0.13
Married, living separately	-0.53*	-0.27	-0.13	0.05
Divorced	-0.32	-0.21	0.03	0.19
Widowed (reference)				
Education				
< High school	0.33	0.36*	-0.10	0.01
High school	0.44**	0.15	0.18	-0.07
Some college	0.02	-0.06	0.14	0.04
Bachelor's	-0.05	-0.07	0.03	-0.02
Professional degree	-0.62***	-0.12	-0.31**	0.15
Master's or higher (reference)				
Religion				0.16
Christian	0.16	0.13	0.23*	-0.04
Muslim	0.14	0.01	0.14	
Other (reference)				
Number of children	0.05*	0.01	0.09***	0.06**
Experience	0.01	0.01	-0.01	< 0.01
Tenure	< 0.01	< 0.01	< 0.01	< 0.01
Empathy		0.43***		0.23***
Moral reasoning		0.09**		0.25***
Religiosity/spirituality		0.10***		0.17***
Self-efficacy		0.24***		0.12***
Adjusted R^2	0.06	0.44	0.04	0.31
R^2	0.08	0.45	0.05	0.33
ΔR^2	0.08	0.37	0.05	0.27

Note. n = 1,266. *p < .05, **p < .01, ***p < .001. Numbers reported are beta estimates. Model 1 includes demographic controls only.

Table 24: Multiple regression results for parents.

	Community mindedness		Forgiveness	
Predictor	**Model 1**	**Model 2**	**Model 1**	**Model 2**
Intercept	0.19	0.29	0.06	0.14
Gender				
Female	-0.09**	-0.13***	0.09**	0.06*
Male (reference)				
Age				
< 18	-0.37	-0.09	-0.50*	-0.23
18-24	-0.26	-0.01	-0.20	0.04
25-34	-0.30*	-0.08	-0.21	0.01
35-44	-0.43**	-0.16	-0.32*	-0.05
45-54	-0.39**	-0.15	-0.30*	-0.05
55-64	-0.28*	-0.09	-0.24	-0.05
65-74 (reference)				
Marital status				
Single, never married	0.02	< 0.01	0.02	-0.01
Married, living together	-0.01	-0.03	-0.01	-0.04
Married, living separately	-0.03	0.03	-0.08	-0.02
Divorced	-0.31*	-0.17	-0.25*	-0.14
Widowed (reference)				
Education				
< High school	0.18**	0.10*	0.24***	0.17***
High school	0.18**	0.05	0.21***	0.09
Some college	-0.06	-0.08	0.17**	0.16**
Bachelor's	0.02	-0.03	0.17**	0.12*
Professional degree	-0.43***	-0.22***	-0.17*	0.01
Master's or higher (reference)				
Religion				
Christian	0.14	< 0.01	0.03	-0.11
Muslim	0.25***	-0.04	0.14*	-0.13*
Other (reference)				
Number of children	< 0.01	-0.01	0.03**	0.03**
Experience	-0.01*	< 0.01	-0.01**	< 0.01
Tenure	0.01**	< 0.01	< 0.01	< 0.01
Empathy		0.48***		0.32***
Moral reasoning		0.12***		0.22***
Religiosity/spirituality		0.18***		0.17***
Adjusted R^2	0.06	0.45	0.03	0.35
R^2	0.06	0.46	0.04	0.35
ΔR^2	0.06	0.39	0.04	0.32

Note. $n = 3{,}970$. $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$. Numbers reported are beta estimates. Model 1 includes demographic controls only.

Table 25: Multiple regression results for university students.

	Community mindedness		Forgiveness	
Predictor	**Model 1**	**Model 2**	**Model 1**	**Model 2**
Intercept	-0.07	0.20	0.53	0.80
Gender				
Female	-0.15***	-0.24***	0.02	-0.06*
Male (reference)				
Age				
< 18	-0.38	-0.20	-0.86**	-0.60**
18-24	-0.36	-0.27	-0.91***	-0.75***
25-34	-0.03	-0.14	-0.41	-0.44*
35-44 (reference)				
Education				
High school	-0.08	0.02	-0.26	-0.17
Some college	-0.14	-0.01	-0.04	0.06
Bachelor's (reference)				
Religion				
Christian	0.46***	0.05	0.57***	0.13
Muslim	0.50***	< 0.01	0.55***	-0.02
Other (reference)				
Empathy		0.32***		0.40***
Moral reasoning		0.08***		0.13***
Religiosity/spirituality		0.12***		0.15***
Self-efficacy		0.02		-0.13***
Sense of belonging		0.31***		0.16***
Adjusted R^2	0.03	0.38	0.05	0.34
R^2	0.03	0.38	0.05	0.35
ΔR^2	0.03	0.35	0.05	0.30

Note. $n = 3{,}530$. *$p < .05$, **$p < .01$, ***$p < .001$. Numbers reported are beta estimates. Model 1 includes demographic controls only.

Table 26: Multiple regression results for school students.

	Forgiveness	
Predictor	**Model 1**	**Model 2**
Intercept	-0.65	-0.32
Gender		
Female	0.10***	-0.02
Male (reference)		
Age		
< 18	-0.09*	0.04
18-24 (reference)		
Education		
< Grade 9	0.22***	0.16***
Grade 9	-0.06	0.14***
Grade 10	0.05	0.13***
Grade 11	0.05	0.07*
Grade 12 (reference)		
Religion		
Christian		0.11*
Muslim		0.18***
Other (reference)		
Empathy		0.34***
Moral reasoning		0.16***
Religiosity/spirituality		0.13***
Self-efficacy		-0.05***
Sense of belonging		0.13***
Adjusted R^2	0.04	0.34
R^2	0.04	0.34
ΔR^2	0.04	0.30

Note. $n = 8{,}247$. $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$. Numbers reported are beta estimates. Community minded is not an outcome int his table because this scale was not administered to school students. Model 1 includes demographic controls only.

Spiral Dynamics Model Application

One aspect of the Mapping the Terrain study is the generation of empirical evidence aligning components of the 3H model (Orr, 1992) with components of the Spiral Dynamics model. The research currently focuses on four constructs – empathy, forgiveness, moral reasoning, and community mindedness – that span the Head, Heart, and Hands of the 3H model (Nasser, Miller-Idriss, & Alwani, 2018). For example, empathy involves problem solving, which is associated with cognitive functions (the head dimension), as well as emotional intelligence, which is associated with emotional functions (the heart dimension). Similarly, forgiveness involves decision making (the cognitive or head dimension) as well as interdependence and social well-being (the behavioral or hands dimension). The extent to which the four selected constructs are representative of the 3H model is beyond the scope of this paper. In this study it is explicitly assumed that these constructs are an acceptable proxy for all latent traits that constitute the 3H model. For a focused discussion of the 3H model, especially its application in the social sciences, we refer the interested reader to Abu-Nimer (2001b), Singleton (2015), Sipos, Battisti, and Grimm (2008), and Spiewak and Sherrod (2011).

The Spiral Dynamics model (Beck & Cowan, 1996; Graves, 1970) has several dimensions that are grouped into three categories (henceforth called Groups 1, 2, and 3). Group 1 includes individuals that can be described as instinctive, animistic, or egocentric. Group 2 includes individuals that are described as absolutistic, multiplistic, or relativistic; and Group 3 includes all individuals who are systemic, holistic, or *tawḥīd* (this last dimension is a proposed extension of the original Spiral Dynamics model [Nasser, Miller-Idriss, & Alwani, 2018]). The sub-categories for each of the three groups have been presented in increasing order of magnitude. For example, the three categories of Group 1 range from instinctive to egocentric in increasing order of magnitude. Similarly, the three sub-categories of Group 2 listed from lowest to highest category are absolutistic, multiplistic and relativistic. For a detailed discussion of the Spiral Dynamics model please refer to Cacioppe and Edwards (2005), Cowan and Todovoric (2000), and Salters (2011).

In order to align dimensions of the two models, a number of statistical methods are available: cluster analysis and factor analysis (Everitt, Landau, Leese, & Stahl, 2011). The exact application of these methods depends on the assumptions made about the number of groups in the population. If we assume that there are exactly nine major categories classified into three ordinal groups (Groups 1, 2, and 3, as defined earlier) as the extended Spiral Dynamics theory suggests, then cluster analysis can be used to force each observation into exactly one of these groups. Cluster analysis is a statistical technique that allows observations to be grouped together based on similarities and dissimilarities of those observations on several metrics. These metrics are typically numeric variables in a quantitative study. A key feature of cluster analysis is that the number of groups formed by observations is unknown and is typically determined based on an optimization criterion. This procedure is different from classification, where the number of groups is known and the objective is to determine group assignment for new observation based on knowledge gained from prior data.

For relatively more refined results, each observation can be classified into one of the nine sub-categories of these groups. In this sense, the problem is reduced to that of group membership where the total number of groups is known, and group membership is based on distances between groups with such distance being a function of underlying construct scores (Ritter, 2015). This approach is an unsupervised approach because there are no prior examples available to guide the group membership process. The approach described in this paragraph can also be applied in an exploratory context where no assumption is made about the number of groups or their sub-categories and instead this information is obtained from the observed sample (Hennig, Meila, Murtagh & Rocci, 2015; Roberts, 1997).

In contrast to the unsupervised approach, group membership information can be collected directly from study respondents. Thus, each person in the study can be asked to select one of the nine Spiral

Dynamics model categories that they belong to. This approach is a supervised approach commonly known as classification (Tabachnick & Fidell, 2013) because we can treat either the scores on 3H constructs or the categories of Spiral Dynamics model as the dependent variable in order to predict the other. In the absence of a variable based on Spiral Dynamics categories in the latest Mapping the Terrain survey, this approach is not explored any further in this report.

The two unsupervised methods mentioned earlier in this section, cluster analysis and factor analysis, were developed to solve two different types of problems. The main purpose of cluster analysis is to identify the natural groups that exist within a dataset. These groups are based on similarities between observations and differences between groups. Several algorithms for such cluster analysis exist such as k-means, two-step cluster analysis, and hierarchical cluster analysis (Hennig et al., 2015). For each of these methods it is possible to impose the total number of clusters into which to split the sample. Alternatively, each method may be run without this constraint and return the total number of clusters based on a pre-defined optimization criterion (Everitt et al., 2011).

In contrast to cluster analysis, the main objective in factor analysis is to reduce the number of dimensions (and thus reduce the complexity) of a model. Factor analysis works by combining underlying items or subscales (i.e. variables) into factors (or scales) based on the similarity among underlying variables. Such factor analysis can be exploratory when no prior constraint exists on the number of extracted factors or confirmatory when a predetermined number of factors is extracted from the procedure (Tabachnick & Fidell, 2013). In either case the method is considered unsupervised because of the absence of a dependent variable (Hofmann, 2001). Although the primary motivation behind factor analysis is to combine variables into factors (as opposed to cluster analysis, where the focus is to combine observations into groups), factor analysis allows only that variation to be retained in extracted factors that is common across all underlying variables. In other words, any variation in underlying variables that can be attributed to random or unknown sources (i.e. all sources other than the four constructs in the 3H model: empathy, forgiveness, moral reasoning, and community mindedness) is left out when factor scores are computed (Tabachnick & Fidell, 2013).

These factor scores can then finally be used to separate observations into groups using a clustering algorithm. Theoretically, this combination of factor analysis and cluster analysis should provide a superior solution to employing cluster analysis in isolation because factor analysis helps remove noise from the underlying variables. However, as discussed in detail earlier, in our sample data factor analysis did not perform very well. Given the low proportions of retained variation and low reliability estimates of subscales, we opted to use scale scores based on item means rather than factor scores. We did, however, combine the four stable item-mean based scales using factor analysis into a single dimension on which cluster analysis was then performed.

A combination of cluster analysis, factor analysis, and cross-validation methods were used in this analysis. A description of each type of analysis follows. It should be noted that school students were not included in cluster analysis because the community mindedness scale was not administered to them.

Cross Validation

In order to guard against overfitting, we divided our sample data into two equal but random parts at the outset of analysis. The objective was to build a cluster model based on one part and then use the other to test its performance. The two subsets are hereafter referred to as the training (n = 6,293) and testing (n = 6,378) samples.

Confirmatory factor analysis

Factor analysis was used on the training sample to combine the four variables representing the 3H model into a single dimension. The motivation for factor analysis was to retain only that part of the

variation that is common in the underlying variables, since that is expected to determine group membership in the Spiral Dynamics model. This was a confirmatory factor analysis, given our earlier assumption that the four variables adequately capture the Head, Heart, and Hands dimensions of the 3H model. We performed factor analysis on the correlation matrix using principal axis factoring as the extraction method and extracted one factor based on eigenvalue > 1 rule (= 2.39). The Kaiser-Meyer-Olkin statistic value was 0.77, and the p value for Bartlett's test of sphericity was $p < .001$. These indicated adequacy of data for factor analysis run. The percentage of total variation in the underlying variables retained by the extracted factor was 46.89%.

Cluster analysis

For cluster analysis the optimal number of clusters, k, was determined from features and interrelationships of input variables – namely, the four variables representing the 3H model: empathy, forgiveness, moral reasoning, and community mindedness. We used the two-step cluster analysis procedure in SPSS rather than the traditional k-means procedure, the latter being a popular clustering method in current literature because of its straightforward implementation (Arora, Deepali, & Varshney, 2016; Hartigan & Wong, 1979; Jain, 2010; Likas, Vlassis, & Verbeek, 2001; Yoo et al., 2012). The two-step cluster analysis procedure has two advantages over the k-means algorithm: It automatically determines the optimal number of clusters based on either the Akaike's Information Criterion (AIC) or the Schwarz's Bayesian Criterion (BIC), and it can handle both numeric and categorical variables as input. We used the mean-based scale scores and survey type as input variables. The two-step cluster analysis on the training sample searched a range of 2–15 clusters with AIC as the selection criterion and identified a total of 3 clusters. We used average value of the silhouette measure of cohesion and separation in order to evaluate cluster analysis performance. This measure ranges between –1 and +1. A value of 1 means that there is no variation within a cluster and values in that cluster are equal to the cluster center (best possible fit). A value of -1 indicates that all cases belonging to a cluster are located on the centers of other clusters (worst possible fit). Finally, a value of 0 means equal distance of a case from its own cluster is exactly equal to the distance between that case and its nearest neighbor cluster. The average value of silhouette measure of cohesion and separation in our cluster run was 0.4 which was classified as fair (on a poor-fair-good rating scale).

In order to examine how the groups were clustered within the categories identified by the first round of cluster analysis, we performed the two-step cluster analysis procedure separately for each first-round. This second round revealed sub-clusters within each of the three initial clusters, albeit with a rating of fair on the silhouette measure. The factor analysis and two rounds of analysis were repeated with the testing sample. The results were almost identical (Factor analysis: KMO = 0.77, Bartlett's p value < .001, percentage of retained variation = 47.0%, number of extracted factors = 1; Cluster analysis: 3 clusters in round one).

Cluster analysis results from round one are summarized in Table 27. These results indicate that based on community mindedness, moral reasoning, empathy and forgiveness, administrators and teachers had similar scores on the underlying factor and thus formed a single cluster. Parents and university students were concentrated in their own clusters.

Cluster analysis results from round two are summarized in Table 28 and represent finer classification into subgroups with the average silhouette measure in the fair range for all three sub-clusters from round one in both the training and testing samples. For example, in the testing sample university students who formed a single cluster in round one were split into three sub-clusters. However, parents were split into two sub-clusters. Administrators and teachers were split into three sub-clusters, with administrators in one cluster and teachers in the remaining two clusters.

In the training sample, instead of the expected 3-3-3 sub-clustering pattern, a slightly different pattern of 3-4-3 was observed. However, it seems that the third sub-cluster results for the aggregate administrator-teacher group resulted from the algorithm's confusion in differentiating between

teachers and administrators. A relatively cleaner result was observed in the training sample where administrators and teachers formed their own sub-clusters in the second round.

Even though our expectation of three clusters with three sub-clusters each was not exactly met, the cluster analysis procedure generated results that were very close to that expectation.

Table 27: Survey group sizes by cluster assignment after first round of clustering.

		N			
Sample	Cluster	Administrator	Teacher	Parent	University student
Testing	1	–	–	–	2,193
	2	254	852	–	–
	3	–	–	2,994	–
Training	1	–	–	3,098	–
	2	268	800	–	–
	3	–	–	–	2,212

Table 28: Survey group sizes by cluster assignment after second round of clustering.

	Cluster		*N*			
Sample	Round 1	Round 2	Administrator	Teacher	Parent	University student
Testing	1	1	–	–	–	832
		2	–	–	–	1,095
		3	–	–	–	266
	2	1	–	460	–	–
		2	–	392	–	–
		3	254	–	–	–
	3	1	–	–	1,495	–
		2	–	–	1,499	–
Training	1	1	–	–	645	–
		2	–	–	1,573	–
		3	–	–	880	–
	2	1	–	247	–	–
		2	–	481	–	–
		3	12	72	–	–
		4	256	–	–	–
	3	1	–	–	–	695
		2	–	–	–	1,130
		3	–	–	–	387

Figure 22 presents the mean 3H value represented by mean factor score based on community mindedness, moral reasoning, forgiveness and empathy, by categories of the Spiral Dynamics model based on the assumption of an increasing trend between the instinctive stage and the *tawḥīd* stage. The corresponding counts are given in Figure 23 suggesting an approximately symmetrical distribution.

Figure 22: Mean 3H score by categories of the Spiral Dynamics model.

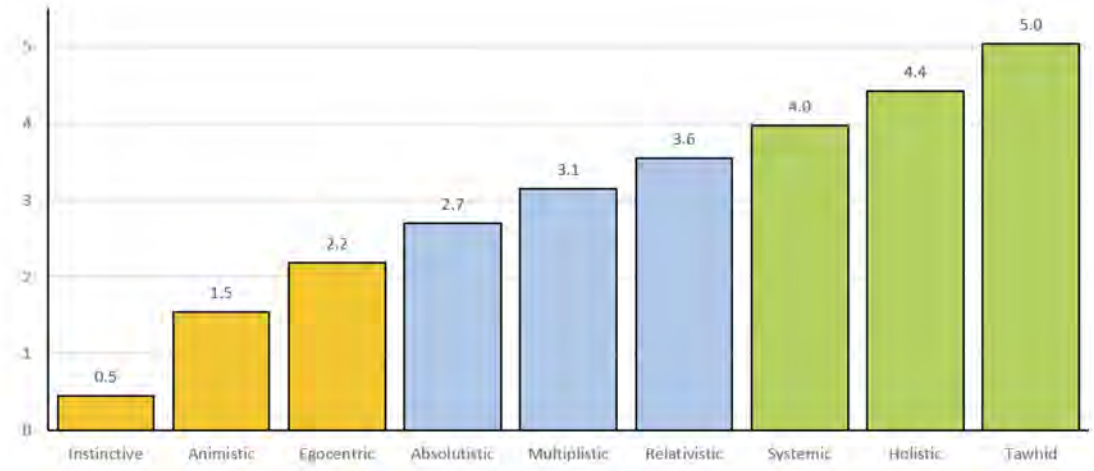
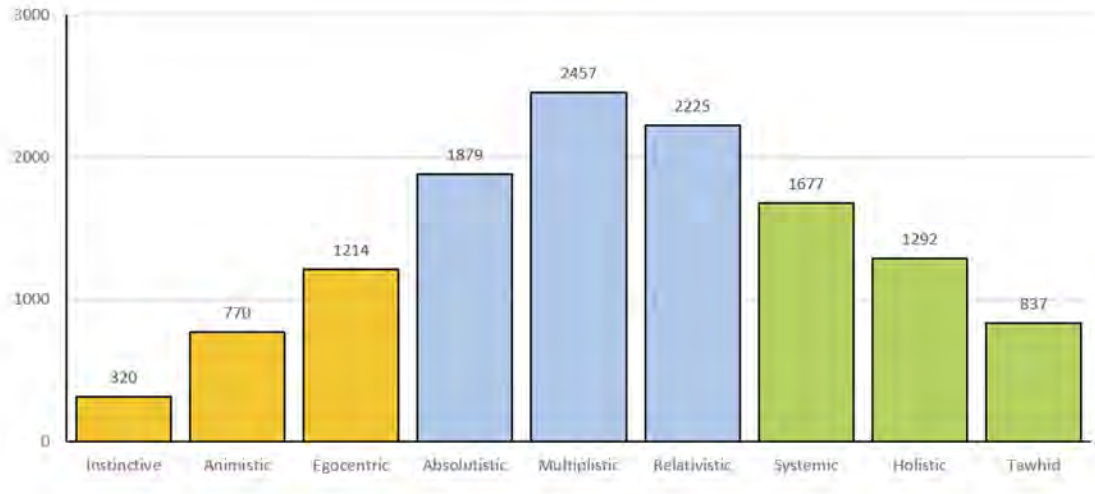


Figure 23: Distribution of respondents by categories of the Spiral Dynamics model.



4. CONCLUSIONS AND LIMITATIONS

This first study is the beginning of an annual attempt to develop an empirical research database and share it widely, making the results and data sets publicly available. The intention is for researchers, academics, policy makers and others to use the raw data to answer more specific research questions, possibly develop comparative studies that expand beyond Muslim societies, and/or propose reform policies and interventions that are locally grounded and authentic to Muslim societies. By developing theoretical frameworks, research instruments, constructs, and measures that reflect and include authentic aspects of Muslim societies, the study hopes to achieve greater local buy-in and engagement for more meaningful outcomes.

This report aims to achieve the above goals and share lessons learned from the Mapping the Terrain (2018-2019) study, including the presentation of the conceptual thinking behind it, the methodology, the scales, and the results and recommendations. There are multiple dimensions and directions that the conclusions may take, but because it is the first attempt at such a large-scale study in Muslim societies, this report will highlight the main lessons learned and discuss the limitations and challenges faced. The focus will be on three themes:

- Who are the participants in the study, and is it possible, here, to paint a picture of the participants based on the survey and the quantitative data? After all, the human faces behind the numbers are what counts.
- Does the model we hypothesized add any new knowledge about the values of choice? What are some of the possible interpretations of the correlations and direction of influence between values?
- How do we interpret the results based on the Spiral Dynamics model we used to frame this annual study?

1. Who are the participants in the study and what do we know about them based on this study?

The results of the study, with a mean sample size of 1,545 (largest from Bangladesh and smallest from Azerbaijan) suggest that most of our participants were young. In fact, 61% of them were below the age of 24 and within that category, secondary school students who are younger than 18 years old were 38% of the sample. The youngest participants were from Bangladesh, followed by Malaysia. Ninety percent of the students were in formal education systems, including public and private K-12 schools. The rest were in extracurricular or community-based small schools.

The parents were the eldest among the adults, on average, with a mean age of 44, followed by administrators (42) and teachers (39). There were also 173 participants from all countries who were above the age of 65; most likely these were teachers and administrators. Eighty-one percent of the adults in the study were married and lived together, as expected in these social groups where divorce is gaining acceptability but generally people stay married as long as possible to keep the family together (Pew Research Center, 2013, p. 82). They mostly had an average of two children. Fifty-six percent of the adults in the sample had education levels between associate degrees and PhDs, and 51% of the teachers had bachelor's degrees. This was anticipated because the adult samples were mostly made of teachers, administrators, and parents (although parents had lower levels of education than teachers and administrators). This aligns well with the minimal educational requirements to teach in many school systems around the globe (Mullis et al., 2008, p. 37).

The participants were balanced in gender; almost half were males and half were females across all surveyed groups except in Palestine, where there were more males included, and Malaysia, where more females were included. This balance is most likely due to our instructions to include similar numbers of males and females especially because in many countries, few schools are co-educational. Gender differences were not significant, which indicates similar and close enough averages on the various scales. All students regardless of country or other demographic variables scored above 3 on most of the scales, suggesting high regard for the items selected and the subscales administered.

Overall 82% of the participants (all groups) were Muslim, and almost half of those identified as Sunni and half didn't but marked themselves as Muslims. This result was expected because most of our samples came from schools with large Muslim populations and areas with large Muslim concentrations. We can't tell whether members of other Muslim groups chose not to identify themselves as such (1.6 percent of participants identified themselves as Shiite, but there could have been more Shia within the sample) or if there weren't any other Muslim groups. The largest non-Muslim populations came from Tatarstan, Kenya, and Mauritius, areas with diverse religious and cultural populations. This also indicates that, in these countries, the researchers included schools and universities that had a mixture of Muslim and non-Muslim students, suggesting a possibility for a more randomized sampling strategy. This wasn't possible in countries with a vast majority of Muslims, such as Bangladesh and Sudan. In general, there were difficulties in some cases with randomly selecting the schools because it was easier to access Islamic schools or districts with larger populations of Muslims, as reported by field researchers in each site.

2. Does the model we hypothesized add any new knowledge on the values of choice? What are some of the possible interpretations of the correlations and direction of influence between values?

In the regression model (Figure 5) we assumed, based on our conceptual framework and the literature reviews, that forgiveness and community mindedness were outcome variables while the rest were predictors. The scales chosen were used in international contexts and were suggested to have high established reliability and validity. On the scale level, the results of the study suggest the same even though on the subscale levels we had lower reliabilities, especially on the "moral reasoning" and "cognitive induction" subscales of empathy. This study utilized as many scales and subscales as possible to end up with those that are solid in terms of their predictability and reliability. Those that were problematic based on factor analysis and for various reasons discussed below under "Limitations," were dropped from the next cycle of the study (2019-2020). As this is a large-scale study and missing values are expected, 20% of the relevant cases were dropped when reliability was calculated and as a result, additional strict criteria were established in the analysis. It is important to note that most items that were problematic were the ones reversed, as almost all showed low reliability. It seems that reversed items, or items that are worded negatively, confused participants after translations or were not translated accurately.

Religiosity received the highest scores among all participants, with a mean of 4.1, followed by moral reasoning (affective, 4.01), and sense of belonging (3.99). Kenya had the highest means on community mindedness, empathy, and sense of belonging and second highest on forgiveness, moral reasoning, religiosity, and self-efficacy. Tatarstan (a region of Russia), on the other hand, had the lowest scores on community mindedness, empathy, forgiveness, moral reasoning and religiosity. The region also received lower means on sense of belonging and self-efficacy as compared to other sites. Hence, despite the desirability bias we see in these types of studies, differences exist between countries and the various groups. Some of the explanations we may propose have to do with the sociopolitical environments in the region, as the only difference we see as unique (as expressed in the analysis) for Tatarstan is that it had the highest non-Muslim population. That it is a Russian region may also suggest less interest in these values, especially religiosity (a leftover from the Soviet regime).

As for Kenya, the country with the highest scores, this may be due to less variation in the samples from Islamic schools and universities in Kenya. Another country in the East African region (Uganda) had the second or third highest scores on all scales and subscales except for self-efficacy. In fact, on the scale levels (as analysis of subscales suggested lower reliability), the three East African countries had some of the highest mean scores on most variables indicating high regard for these values. It is hard to tell though if it's purely higher regard or other factors were at play. It seems fitting to look deeper into the data from these sites and look at the variation in types of schools as well as rural versus urban settings. This requires identifications of regions and types of schools that only local experts can address.

Out of the five target groups, school students had the lowest means on the scales administered to all groups except for religiosity where they had scores consistent with administrators, teachers, and parents. Further, they scored higher on religiosity than university students did. This may be because university students are exposed to more disciplines and viewpoints than secondary school students are, and they were representing various areas of study. There may be other reasons such as whether universities were mostly public or Islamic institutions, but we must investigate further by examining each university that participated in the study in each country.

As for the correlations between variables, the results suggest high and significant correlations, especially between empathy and community mindedness, forgiveness, moral reasoning, and sense of belonging. In general, variables such as empathy, moral reasoning, religiosity/spirituality, self-efficacy, and sense of belonging had strong prediction relationships with both community mindedness and forgiveness. For instance, community mindedness highly and significantly correlated with sense of belonging, suggesting a positive relation between feeling part of a group and being community oriented. This has been suggested in the literature, where empathy was foundational to many other values (Paris, 2015).

This highlights the importance of exposing children to empathy education (socio- emotional education in general) in the early years and suggests the need for further investigation of how empathy can be taught at a younger age to raise new generations of empathetic youth and adults (Sierksma, Thijs, & Verkuyten, 2014). Furthermore, and based on the two regression models administered, raising empathy and self-efficacy predicted an increase in community mindedness, promoting the importance of both in the societies we research that are more collective and community-oriented (Darwish & Huber, 2003).

Interestingly, gender had an impact on predicted community mindedness among administrators. Females had significantly higher scores on this construct, while gender effects favoring males were found among teachers and university students when predicting community mindedness. Further effects of gender were found on forgiveness especially among school students. Age was also a predictor of forgiveness, because older participants scored higher than younger ones on forgiveness attitudes. The effects of self-efficacy on forgiveness were positive among teachers and administrators, while the effect of self-efficacy on forgiveness in university students was negatively correlated. This suggests that higher self-efficacy lowered forgiveness among younger students. This is an interesting result, as forgiveness research points out to various types of attitudes when deciding to forgive, one of which is conditional forgiveness, which may be the case here (Abu-Nimer & Nasser, 2013). University students forgive inconsistently, which is characteristic of this type of forgiveness. Predictions of forgiveness were similar, with empathy, moral reasoning, and self-efficacy predicting the levels of forgiveness. Here also the effect of education was significant in predicting forgiveness because of a mean difference between those with high school education and those with master's degrees and higher.

3. How do we interpret the results based on the adapted human development model we use to frame this annual study?

The conceptual model that this study is based on uses the Spiral Dynamics model (Beck & Cowan,

1996) as the framework to articulate the vision and the interpretation of the results. We also use the 3H model (Orr, 1992) as a mechanism toward change and empowerment to move people along the trajectory. In the analysis, the various states were grouped into three categories, with the last one including the *tawḥīd* state of mind as the highest with a score of 5 on a 1-5 Likert scale. The analysis suggests that the majority of the participants were in the middle category (Absolutistic-Multiplistic-Relativistic) while the smallest number were in the first category (Intrinsic-Animistic-Egocentric). The last category (Systemic-Holistic-*tawḥīd*) had the second highest number of participants.

The symmetrical distribution presented is, in fact, good news for the study, because despite some of the harsh realities experienced in some places such as Palestine and Sudan, most of the participants were away from the Intrinsic-Egocentric states that describe early and instinctive states of existence and consciousness. This category is more tribal and less logical and systemic (Beck & Cowan, 1996). Being in the middle states of consciousness means people could be empowered to move to higher states as long as life conditions don't worsen. Without the intention of reading too much into this, it seems this result has promise for interventions in curriculum and pedagogy as well as in policy recommendations that utilize the Head-Heart-Hands strategy to reach higher states such as the holistic and the *tawḥīd*. In that process educational programs infusing the values included in the study and a values-based approach to education could make a difference for the next generation of students in Muslim societies.

At this stage of the study and as we move through the annual waves, deepen the knowledge in the model, and explore ways in which values play roles in the developmental trajectory even further, we will be able to refine our methodology and analysis to make more meaning out of these results. For now, we can say that students in Muslim societies along with teachers, parents, and administrators are using their values such as empathy and synthesis-oriented thought (characteristics of systemic-relativistic stages) to address everyday challenges that we asked about in the surveys. It is true that we assumed this trajectory and "forced" participants into categories, but this still had meaning. Further development of this strategy is promising in interpreting the results.

Limitations of the Study

It is clear to us that despite all efforts, random sampling strategies didn't occur in all sites. A convenient sampling model was at play amid attempts to randomize at each level possible; even where random schools were not guaranteed, random classrooms were selected. This was mainly because of two factors. First, it was easier for the coordinators to use existing networks in many countries to conduct the study. Second, there were difficulties associated with conducting empirical research in many of the countries in the study and gaining approval to enter government-run schools. As noted in previous studies, people are usually skeptical of researchers and are resistant to perceived agendas dictated by the West (Kamuya, et al., 2013). The research team, headquartered in the United States, had to prove their credibility and authenticity during a training workshop that was conducted in July 2018, at the launch of the study. Several skeptical participants scrutinized the study's objectives and rationale and, as a result of that skepticism, their countries are not represented in the study because they chose not to participate.

It is also clear that desirability bias is always there in survey studies (Kaminska & Foulsham, 2013) and is always one of the limitations of such a design. That there were significant variations in the results among the different countries testifies to the fact that individuals in different religious and cultural contexts responded differently, and some of those differences could have been because of diverse understanding of the values. For example, the results from Tatarstan were much lower than those from other locations on religiosity. This could be because the understanding of religiosity, forgiveness or other values differed from one language to another and from one sociocultural context to another. This may have been intensified by the use of translations into different languages, where some meaning was lost in translation.

Nevertheless, in one of the later meetings of the coordinators from various sites, we had two focus groups working on defining "empathy" from their context. At the end of the two sessions, we collected the definitions from each participant and shared with them the definition that we came up with based on the review of previous studies. Participants from the 13 countries and one republic within a country came up with almost identical definitions, with the addition of a phrase that "with the help of God and trust in Him," suggesting religious sentiments that researchers assigned to the values. In order to prevent such misunderstandings and variation in translations, for the next round, each translated survey and the back translations were conducted by two different people, and the back translations were thoroughly examined by the research team.

Finally, several other limitations are anticipated in such a study, one of which is that we may have had too many target groups, and some might have been problematic such as the parents' group where we had a lower return in some cases. We may have also included too many subscales, which made some of them look similar and hence affected the reliability of the subscales (in addition to the translations of reversed items). In the second round, we are reducing the target groups and the number of the subscales, especially ones that showed low reliability such as moral reasoning. As one of our objectives is to produce high-quality and authentic research, we will continue to refine the methods and the processes in place.

Education reform can't solve all the challenges of education systems and stakeholders within Muslim societies, nor will it work unless developed in tandem with reforms at the levels of policy and governance. Moreover, education aims, content, strategies, and purposes are constantly and rigorously debated and contested. The questions of why students go to school, what they learn, whether and how they have opportunities to continue to post-secondary education, and how any or all education is needed for successful engagement as citizens, are highly politicized.

Further research is always needed, as this study contributes to the field and provides some answers to questions that may arise based on the results in policy, pedagogy and curriculum. For example, what policy recommendations might we suggest that will promote empathy, forgiveness, and community mindedness among others in Muslim majority schools and universities based on the results? Are the ministries involved in the research (in the multiple sites) willing to set educational standards and guidelines to promote the above? What changes are needed in the curriculum to promote empathy and other concepts as identified in the research? In pedagogy, what would the results on the existence of high or low levels of empathy, forgiveness, and others mean to teachers, administrators, and others and ways they teach and model behaviors of empathy, forgiveness, etc.? How do schools make the connection between knowledge of these topics and having the needed set of skills? Lastly, how can people in leadership and administrative positions model behaviors that reflect a values-based approach to leadership which takes into consideration empathy, forgiveness, etc.? Which policies and strategies do these leaders engage in to promote these factors?

Numerous research questions can stem from this study, including regional interests and analysis. For example, the results in East Africa may answer more specific questions about that region, or the results from Central Asia may inform the fields of education, human development, religious education, and others regarding the unique dynamics in the region. The public availability of the data sets from this year and beyond will support scholars interested in certain regions or countries as well as specific constructs.

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APPENDIX A

Countries/Sites participating in Mapping the Terrain 2018-2019

- Azerbaijan
- Bangladesh
- Bosnia
- India
- Indonesia
- Kenya
- Kyrgyzstan
- Malaysia
- Mauritius
- Palestine
- Sudan
- Tatarstan
- Tanzania
- Uganda

APPENDIX B

Item description

Religiosity/Spirituality

1. How important is your religion for you?
2. How important is prayer for your religious beliefs?
3. How important is it for you to feel that God intervenes in your life?
4. How important is it for you to belong to a religious group?
5. How important is your religion in defining who you are?
6. How important is it for you to go to your place of worship?
7. How important is volunteering for you based on your religious beliefs?

Response choices: 1 = Not important, 2 = Slightly important, 3 = Moderately important, 4 = Important, 5 = Very important

Religiosity/Spirituality

1. I spend time trying to grow in understanding of my faith.
2. It is important to me to spend periods of time in private religious thought and reflection.
3. Religious beliefs influence all my dealings in life.
4. Religion is especially important to me because it answers many questions about the meaning of life.
5. I often read books and magazines about my faith.
6. I enjoy working in the activities of my religious organization.
7. I enjoy spending time with others of my religious affiliation
8. I keep well informed about my local religious group and have some influence in its decisions.
9. I make financial contributions to my religious organization.
10. My religious beliefs lie behind my whole approach to life.

Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Empathy

Perspective taking

1. I believe there are 2 sides to every question and try to look at them both.
2. When I'm upset at someone, I usually try to "put myself in his place" for a while.
3. Before criticizing somebody, I try to imagine how I would feel if I were in their place.
4. If I am sure I am right about something, I don't waste much time listening to other people's arguments.
5. I sometimes find it difficult to see things from the "other person's" point of view.
6. I try to look at everybody's side of a disagreement before I make a decision.

Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Affective

1. When someone else is feeling excited, I tend to get excited too.
2. Other people's misfortunes do not disturb me a great deal.
3. It upsets me to see someone being treated disrespectfully.
4. I remain unaffected when someone close to me is happy.
5. I enjoy making other people feel better.
6. I have tender, concerned feelings for people less fortunate than me
7. When a friend starts to talk about his/her problems, I try to steer the conversation toward something else.
8. I can tell when others are sad even when they do not say anything.
9. I find that I am "in tune" with other people's moods.
10. I do not feel sympathy for people who cause their own serious illnesses.
11. I become irritated when someone cries.
12. I am not really interested in how other people feel.
13. I get a strong urge to help when I see someone who is upset.
14. When I see someone being treated unfairly, I do not feel very much pity for them.
15. I find it silly for people to cry out of happiness.
16. When I see someone being taken advantage of, I feel kind of protective toward him/her.
17. For this question please simply select 'Strongly agree' as your answer.

Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Cognitive inclusion

1. When I hear people make jokes about other groups of people, I tell them I am offended even though they are not referring to my group.
2. I express my concern about discrimination to people from other groups.
3. I recognize that the media often portrays people based on racial and ethnic stereotypes.
4. I feel uncomfortable when I am around a significant number of people who are different than me.
5. I feel irritated when people of different backgrounds speak their language around me.

Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Caring

1. I help others even when there is no direct benefit to me.
2. If someone I do not know asks me for help, I will immediately help them.
3. When I see suffering, I try to find ways to alleviate it.
4. When I see individuals in need, I think about how to relieve their distress or meet their needs.
5. If someone I do not know intends to borrow something which is really important to me, I will lend it to them nonetheless.
6. I can relinquish my material goods in favor of the common good.
7. When I see individuals in need, I ask them how I can help.

Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Forgiveness

My attitudes

1. If someone wrongs me, sooner or later I will make him or her pay for it.
2. I don't believe in second chances.
3. Forgiving someone who has wronged me means allowing that person to walk all over me.
4. Even if someone wrongs me, it would be wrong to seek revenge.
5. When I think about forgiving, justice is more important than mercy.
6. A person should abandon all ill will toward the person they forgive.
7. Anger affects your decision of forgiveness to a great extent.
8. Over time, a person's forgiveness of another will usually come about by itself.
9. To forgive completely, a person should try to make everything go back to the way it was before the injury.
10. No matter what has happened with a family member, after thorough discussion, all can be forgiven.
11. No matter what has happened with friends, after thorough discussion, all can be forgiven.

Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Decisions

1. Imagine that your brother/sister borrowed your car and while he was driving it he crossed a red light and hit another car, which caused a great damage to your car, but no one was hurt.
2. Imagine a young man from your town who was almost engaged to one of your sisters broke up with her.
3. Imagine you told your sibling a secret and you wanted him/ her not to tell anyone, then you discovered that he/she had disclosed this secret to few people.
4. Imagine you had an argument with your cousin and he asked you to leave his or her house.
5. Imagine you were at a social gathering and you heard someone from your same religion curses yours.
6. Imagine you were at a social gathering you heard someone who is different from your religion curses yours.
7. Imagine that one of your next door neighbors built a wall around his house, and then you came to realize that his wall was inside your land or property.
8. Imagine that one of your friends starts a nasty rumor about you that is not true. As a result, people begin treating you worse than they have in the past.
9. Imagine that a friend borrows your most valued possession and then loses it. The friend refuses to replace it.

Response choices: 1 = Extremely unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Extremely likely

Moral reasoning

Affective

1. One of the worst things a person could do is hurt a defenseless animal.
2. It can never be right to kill a human being.
3. People should be loyal to their family members, even when they have done something wrong.
4. It is more important to be a team player than to express oneself.
5. For this question please simply select 'Strongly agree' as your answer.

Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Cognitive/Decisions

1. Whether or not someone acted unfairly.
2. Whether or not someone acted in a way that God would approve of.
3. Whether or not someone conformed to the traditions of society.
4. Whether or not some people were treated differently than others.
5. Whether or not someone showed a lack of respect for authority.
6. Whether or not someone violated standards of purity and decency.

Response choices: 1 = Not at all relevant, 2 = Slightly relevant, 3 = Somewhat relevant, 4 = Very relevant, 5 = Extremely relevant

Community mindedness

1. I keep very well informed about current issues of social justice.
2. Others I work with would likely describe me as someone who is at ease working with people from diverse ethnic backgrounds.
3. I feel confident in my ability to bring people together to address a community need.
4. I feel very comfortable recruiting others to become more involved in the community.
5. Others would likely describe me as a person who is well informed about a variety of volunteer opportunities in the community.
6. I am well connected to a number of people who are active in their communities.
7. I am very interested in current events.
8. I have a strong ability to come to consensus with others through dialogue and compromise.

Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Self-efficacy

Efficacy

1. How much can you do to get faith-based institutions involved in working with your school?
2. How much can you do to get local colleges and universities involved in working with your school?
3. How much can you do to make your school a safe place?
4. How much can you do to get your students to trust you?
5. How much can you do to overcome the influence of adverse community conditions on your students' learning?
6. How much can you do to enhance collaboration between teachers and the administration to make your school run effectively?
7. How much can you do to get businesses involved in working with the school?
8. How much can you do to make students enjoy coming to school?
9. How much can you help other teachers with their teaching skills?
10. How much can you do to reduce school dropout?
11. How much can you do to reduce school absenteeism?
12. How much can you do to get students to believe they can do well in schoolwork?
13. How much can you help teachers with their teaching skills?

Response choices: 1 = Nothing, 2 = Very little, 3 = Some influence, 4 = Quite a bit, 5 = A great deal

Need satisfaction

1. I feel like I can make a lot of inputs to deciding how my job gets done.
2. I really like the people I work with.
3. I do not feel very competent when I am at work.
4. People at work tell me I am good at what I do.
5. I feel pressured at work.
6. I get along with people at work.
7. I pretty much keep to myself when I am at work.
8. I am free to express my ideas and opinions on the job.
9. I consider the people I work with to be my friends.
10. I have been able to learn interesting new skills on my job.
11. When I am at work, I have to do what I am told.
12. Most days I feel a sense of accomplishment from working.
13. My feelings are taken into consideration at work.
14. On my job I do not get much of a chance to show how capable I am.
15. People at work care about me.
16. There are not many people at work that I am close to.
17. I feel like I can pretty much be myself at work.
18. The people I work with do not seem to like me much.
19. When I am working I often do not feel very capable.

20. There is not much opportunity for me to decide for myself how to go about my work.
21. People at work are pretty friendly toward me.

Response choices: 1 = Not at all true, 2 = Not true, 3 = Somewhat true, 4 = True, 5 = Very true

Initiative

1. If something looks too complicated I will not even bother to try it.
2. I avoid trying to learn new things when they look too difficult.
3. When trying to learn something new, I soon give up if I am not initially successful.

Response choices: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always

Effort

1. When I make plans, I am certain I can make them work.
2. If I can't do a job the first time, I keep trying until I can.
3. When I have something unpleasant to do, I stick to it until I finish it.
4. When I decide to do something, I go right to work on it.
5. Failure just makes me try harder.

Response choices: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always

Persistence

1. When I set important goals for myself, I rarely achieve them.
2. I do not seem capable of dealing with most problems that come up in my life.
3. When unexpected problems occur, I don't handle them very well.
4. I feel insecure about my ability to do things.

Response choices: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always

Sense of belonging

Schooling

1. The teachers have respect for me.
2. I am treated with as much respect as others at my school.
3. It is hard for people like me to get accepted here.
4. Sometimes I feel as if I don't belong here.
5. People here notice when I'm good at something.
6. I feel very different from most other students here.
7. I feel proud of belonging to my school.
8. Other students here like me the way I am.
9. Other students in my school take my opinions seriously.
10. Most teachers at my school are interested in me.
11. There's at least one teacher or other adult in this school I can talk to if I have a problem.
12. People at this school are friendly to me.
13. Teachers here are not interested in people like me.
14. I am included in lots of activities at my school.
15. I can really be myself at this school.
16. People here know I can do good work.
17. I wish I were in a different school.

Response choices: 1 = Not at all true, 2 = Not true, 3 = Somewhat true, 4 = True, 5 = Very true

Social support

1. I feel that my family understands me.
2. I feel that my friends understand me.
3. I feel useful to my family.
4. I feel useful to my friends.
5. I have a definite role in family and among friends.
6. I can talk about deepest problems with some family and friends.
7. There are more than two people that I can depend on or feel close to in local area (other than family).
8. I know what is going on with family.
9. I know what is going on with friends.
10. I am satisfied with kinds of relationship I have with family.
11. I am satisfied with kinds of relationship I have with friends.

Response choices: 1 = Not at all true, 2 = Not true, 3 = Somewhat true, 4 = True, 5 = Very true

Relatedness

1. I really like the people I interact with.
2. I get along with people I come into contact with.
3. I pretty much keep to myself and don't have a lot of social contacts outside my family.
4. I consider the people I regularly interact with to be my friends.
5. People in my life care about me.
6. There are not many people that I am close to.
7. The people I interact with regularly do not seem to like me much.
8. People are generally pretty friendly toward me.
9. I feel connected to my friends on social media (FB, Instagram, etc.).
10. Compared with reality, I am more satisfied with online interpersonal relationships.
11. Compared with reality, I prefer to know someone through social media.

Response choices: 1 = Not at all true, 2 = Not true, 3 = Somewhat true, 4 = True, 5 = Very true