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Moral Centrality Predicts Better Mental Health: Evidence for the Protective Effects of Integrating Agency and Communion

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By

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ABSTRACT

Moral behaviour has long been associated with well-being, but the nature of this relationship is not fully understood. The reconciliation model of moral centrality offers a unique framework to understand this relationship. According to the reconciliation model, the opposing force between self-interest and morality can be transformed to one of synergy by developing moral centrality. In turn, this confluence if self-interest and morality should lead to higher psychological well-being. The aim of this study was designed to examine the association between moral centrality and standard markers of mental health and well-being while statistically controlling for any protective effects of altruistic behaviour. Participants were 119 undergraduate university students who completed an online questionnaires assessing standard markers of mental health and well-being, and open-ended questions about their cherished goals. Moral centrality was operationalized as the tendency to coordinate agentic (self-interested) and communal (concern for others) values in these self-narratives. Moral centrality was positively associated with well-being and self-esteem, and negatively associated with negative affect, depression, and anxiety. Altruism did not explain this association and instead was associated only with positive affect. An exploratory analysis revealed that the specific coordination of the agentic value achievement and the communal value benevolence may be responsible for this association. Together, these results suggest that the coordination of agentic and communal motivations may play a meaningful role in the maintenance of mental health and psychological well-being.

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LIST OF ABBREVIATIONS

BDI	Beck Depression Inventory
IIP-T	Inventory of Interpersonal Problems (Total)
MCI	Moral Centrality Index
MLQ-P	Meaning of Life Questionnaire (Presence)
MPSL	Modified Personal Strivings List
PANAS	Positive and Negative Affect Schedule
PVG	Personal Values and Goals
QEWB	Questionnaire for Eudaimonic Well-Being
RSES	Rosenberg Self-Esteem Scale
SRA	Self-Report Altruism Scale
STAI	State-Trait Anxiety Inventory
VEIN	Values Embedded in Narrative

CHAPTER I.

Introduction

The interweaving of morality and mental health has been a pervasive theme throughout history. First explicitly articulated in Plato's *Republic* as *moral health*, the idea that morality is in some way related to human well-being and happiness is a core assumption in many world religions and philosophies like Buddhism, Stoicism, Yoga, and Aristotelianism, and continues to be a compelling proposition in modern society. Indeed, many best-selling self-help books promote the mental health benefits of character development, such as such as Peterson's *12 Rules for Life: An Antidote to Chaos* (2018) and Covey's (1989) *The 7 Habits of Highly Effective People*.

Evidence for this connection is growing with research showing that, for instance, prosocial and altruistic behaviour is associated with greater happiness (Borgonovi, 2008; Phelps, 2001; Post, 2005) and overall mental health (Schwartz et al., 2003). Similarly, programs like the 12-Step Program have demonstrated success with using moral treatment and ethical discipline as tools to combat mental illness and addiction, and there are now many professionals arguing for the utility of employing ethics and character development in psychotherapy (see Andrews, 1989; Martin, 2006; Waring, 2012). The success of these interventions suggests that there is great potential for developing novel treatments that integrate moral values.

Yet despite the evidence for the association between morality and well-being, the nature of this relationship remains elusive. According to one account, morality is psychologically beneficial because it incurs social rewards (Hardy & Van Vugt, 2006; Stavrova et al., 2013). Although this view was supported in some studies, other studies

indicate that something about holding moral values can be inherently beneficial, regardless of whether they are socially rewarded (see Helliwell, 2003; James, 2011; Aknin et al., 2013). Here, Frimer and Walker's (2009) reconciliation model of moral centrality will be explored as a framework for understanding the relationship between morality and mental health. Moral centrality refers to moral behaviour being seen as compatible with one's own best interests and is a prominent characteristic of people who are publicly recognized to be moral exemplars (Colby & Damon, 1992). According to the reconciliation model, moral centrality is achieved when people reconcile their normally competing drives for agency (self-interest) and communion (morality) such that the satisfaction of one implies satisfaction of the other. That is, people identify moral action as being in their own interest so that the distinction between morality and self-interest becomes a false dichotomy.

In this paper, I propose that the reconciliation model of moral centrality can help to explain why morality might be associated with mental health and well-being. In short, the reconciliation model posits that the drives for agency and communion are developed as two distinct motivational systems that are normally in tension. This tension becomes a source of internal disequilibrium, which can result in an overt focus on satisfying one drive at the cost of the other. Conversely, because the development of moral centrality represents a synergistic integration of these needs, whereby the satisfaction of communion implies the satisfaction of agency, it may allow for a more balanced drive satisfaction and thus serve to promote mental health and psychological well-being.

The purpose of this study is to examine whether the reconciliation of agentic and communal goals is associated with psychological well-being. Although altruism and

prosocial behaviour may contribute to mental health, the goal of this study is to examine whether the integration of agency and communion may promote well-being or serve as an additional buffer against psychological distress, above and beyond altruism and prosocial behaviour. Thus, the primary hypothesis of this work is that the integration of agentic and communal motivations will be associated with markers of mental health, even after accounting for the possible benefits of altruistic behaviour. If this hypothesis is verified, this research will provide further clarification of the complex relationship between morality and psychological well being.

Morality

Although morality is often conflated with altruism, the two concepts are distinct. Morality can be defined descriptively as "certain codes of conduct put forward by a society or group, such as a religion, or accepted by an individual for her own behavior" (Gert & Gert, 2017). In contrast, altruism refers to concern for, and behaviour that is aimed at, the welfare of others. Although morality often results in altruistic behaviour, morality also encompasses an idea of right and wrong that altruism does not. That is, moral principles are rules of behaviour that are intended to be followed regardless of whether or not they contribute to the good of another person. For instance, subscribing to the moral principle of honesty may prohibit someone from lying, even if it would benefit someone else.

Moral motivation is often conceptualized in two ways. First, morality can be thought of as a duty that is either unrelated or even opposed to human impulses and self-interest. This way of thinking will be referred to as the duty-based paradigm of morality. According to this view, morality is a set of rules or imperatives that must be followed because they are the right thing to do. Acting morally therefore is not associated with

well-being and can induce people to behave in ways that interfere or are against their own self-interests. In support of this view, Bakan (1966) argues that unmitigated agency is the root of all evils and thus the goal of moral development must be to quell agency in favour of communal motivation.

One of the most well-known examples of this form of duty-based moral system is the moral philosophy of Kant. Central to his philosophy is a rational call to morality known as the categorical imperative: "act only according to that maxim whereby you can, at the same time, will that it should become a universal law" (Kant, 2002, p.37). This appeals to morality strictly on rational grounds. For Kant, people engage in moral activity out of a sense of duty because it is rational, not because it makes them happy. For people who hold this view, the main task of character education is to teach people to be "governed by duty" (Baron, 1985; p. 146). Thus, the rules of morality from this perspective are conceived of as a guide to being a good person, but not as a guide for well-being.

A second view is that acting morally is in the best interest of the actor. This paradigm will subsequently be referred to as the enlightened self-interest perspective. According to this view morality is often, if not always, somehow motivated by self-interest. A person is said to have developed enlightened self-interest when they identify the interests of others as being their own best interest. To grasp this concept, it can be useful to think of enlightened self-interest from the perspective of playing a team sport. When playing a team sport, the best interest of the player and the best interest of the team are the same. A selfish player that does not pass or play fairly will cause their teammates to dislike them and ultimately make the team more likely to lose. In this situation, it is in

the player's best interest to be a good team player, because that ultimately increases his chances of winning the game and of being liked by his teammates. The player experiences enlightened self-interest insofar as she has internalized this truth and plays by these rules, doing what is best for the team. In contrast, the player demonstrates unenlightened self-interest when she plays selfishly and ignores her teammates.

Enlightened self-interest suggests that living a moral life is healthy, which is an explicit assumption in many philosophical, religious, and spiritual practices. To illustrate this, I will briefly examine two traditions that are a part of the separate fields of religion and philosophy because they both can be clearly related to the reconciliation model of moral centrality.

One example from philosophy was developed by Aristotle. In his *Nichomachean Ethics* (2000), Aristotle writes about *eudaimonia,* which is a definition of human well-being that is characterized by living up to one's true potential as a human being. According to Aristotle, the ultimate aim of moral thought and behaviour is to achieve this state of eudaimonic well-being. This requires one to develop behavioural inclinations to act in a way that contributes to personal flourishing. That is, to shape the appetites so that they are expressed in a healthy and beneficial way. For example, food is related to pleasure, energy, and health, but the natural appetites for food are not always harmonious with what is healthy. Developing virtue in this regard would be to actively shape the appetite and develop habits so that healthy options are preferred. Similarly, creating a habit of channelling stress towards exercising would be considered virtuous, while a smoking habit would be considered a vice. In both cases, people shape their basic physical appetites in such a way that their satisfaction will lead to long term benefits.

This concept of channelling the physical appetites can be extended to behavioural expectations in personal relationships and society at large. Abiding by behavioural expectations may prevent the satisfaction of a basic desire. For instance, a child being asked to get along with others and follow the rules of a game may experience a threat to their personal agency. However, they may come to see abiding by the rules and playing fair as a method by which they can make new friends and get invited to play future games. Thus, playing by the rules stops being perceived as a threat to personal agency. Rather, it becomes satisfied in a way that corresponds with behavioural expectations and which leads to positive future benefits.

Another example of a moral system that holds an enlightened self-interest perspective is the philosophy of Ashtanga Yoga, which was formulated in Patanjali's Yoga Sutras. This ancient philosophy is based on eight principles, often referred to as the eight limbs of yoga that, when adhered to, lead to a calm mind and a reduction in distress (Maehle, 2006). Of primary importance here is the inclusion of 10 ethical rules: five rules of conduct towards others called *yamas*, which include principles like non-violence (ahiṃsā), and five rules of conduct towards the self called *niyamas,* which include principles such as self-discipline (tapas). These ethical principles are practised because they promote harmonious relationships, a pure mind, and ultimately lead to a calm mind (Maehle, 2006).

To briefly summarize, in both Yogic and Aristotelian ethics, living morally is ultimately a means to an end related to mental health and living well. In Yoga, that end is a calm mind, and for Aristotle, that end is *eudaimonia*. These examples are significant because they are ancient expressions of the proposition that morality is a key component

of mental health: Both systems explicitly prescribe moral imperatives as a means towards well-being, optimal mental functioning, and a more balanced life.

Evidence of Enlightened Self-Interest

Evidence in support of the contribution of enlightened self-interest to mental health has grown steadily over the past decades, and there is now evidence to support that moral interventions promoting enlightened self-interest can contribute to mental health. A well-known example of this integration is Alcoholics Anonymous' 12-step program. Among 11 other steps, one requires its adherents to make a list of people they have harmed and attempt to make amends to them. This 12-step approach has become a popular treatment option that has been expanded to treat a large number of problem behaviours such as gambling and drug addiction. Indeed, up to 9% of the US adult population have attended at least one Alcoholics Anonymous meeting, and that number grows to over 13% of the adult population when non-alcohol oriented groups, such as Gamblers Anonymous and Narcotics Anonymous, are included (Room & Greenfield, 1993). Studies have shown 12-step programs to be equally effective as dialectical behaviour therapy (Giannelli et al., 2019) and cognitive behavioural models of substance abuse treatment (Ouimette et al., 1997), and there is evidence that the moral components of the treatment contribute to its success. For instance, a qualitative study found that taking personal responsibility for past mistakes was considered by participants to be a key ingredient of recovery (DeLucia et al., 2015).

Yoga is another example of a practice with a moral component that may improve mental health. Although westernised forms of yoga consist exclusively of physical activity, the practice of yoga was originally conceived as a holistic lifestyle that combines

spiritual, physical, and ethical practices. Specifically, the practice of yoga encompasses eight components that are intended to work synergistically: ethical *behaviour*, self-purification, physical postures, breathing practice, discipline of the senses, concentration, meditation, and self-realization (Maehle, 2006). An integrated yoga practice combines these principles within the physical practice so that they become a truly lived experience that integrates mind and body. According to this tradition, these components synchronistically work to calm the mind and increase well-being. In congruence with these claims, the practice of yoga has been shown to be associated with many mental health benefits, and it is quickly gaining popularity as a clinical intervention for a wide array of mental illnesses. Indeed, yoga has been shown to improve anxiety and depression symptoms, affect, self-esteem, and interpersonal functioning (Jarry et al., 2017), and a meta-analysis found evidence for the superiority of yoga over relaxation and aerobic exercise in improving depression (Cramer et al., 2013).

The success of interventions with a moral component provides ample reason for further exploration of the role of morality in psychological well-being. However, there has been little academic research conducted on how, or even whether, the morality component of these interventions contributes to their positive impact on mental health. Because treatments involving morality are inevitably combined with other treatment components, it is difficult to isolate the effect of the moral components of the treatment. For instance, comprehensive 12-step programs often are compared to different forms of psychotherapy (see Linehan et al., 2002; Ouimette et al., 1997), but there are many non-moral aspects such as social support and fellowship of the 12-step program that may be contributing to its success as a treatment. Similarly, although yoga has a strong ethical

component, it is unknown whether this ethical component plays a role in the mental health benefits of yoga-based interventions. For example, the yoga intervention used in Jarry, Chang and LaCivita's (2017) study includes both ethical talks and physical poses, but the question remains whether the talks, the physical poses, or both are responsible for the intervention's positive outcomes.

To date, there has only been one study comparing a holistic yoga intervention with a purely exercise based practice (Smith et al., 2011). In this study, participants were assigned to either a yoga-as-exercise, integrated yoga, or a control group whose participants completed questionnaires but did not participate in any type of intervention. In both yoga conditions, participants completed biweekly yoga sessions for 7 weeks. The integrated yoga group's exercises were accompanied by meditation based on the ethical principles of yoga, while the yoga-as-exercise group omitted this aspect. Although participants in both yoga groups experienced a decrease in depression and stress and an increase in hopefulness, only the group that practiced the integrated yoga experienced a decrease in anxiety-related symptoms and in salivary cortisol. These results suggest unique benefits of the ethical aspects of yoga-based interventions, but more research is needed to fully explore their impact.

In addition to these alternative therapies, there has been a general movement from mental health professionals to include aspects of morality into their practice. In his book, *To Thine Own Self Be True*, Lewis Andrews (1989) documents the rise of mental health care workers who are "promoting ethical discipline as *an explicit form of psychotherapy*" (p. 8). He observes that, although academics continue to describe and conceive of mental health issues as medical diseases that are completely outside the control of those who

suffer from them, many mental health care workers are now explicitly promoting ethical discipline. Andrews argues that, even though training in psychotherapy focuses on remaining objective and value-free, most mental health care professionals rely heavily on ethics. He points to a survey showing that over 95% of professionals agree with the idea that "assuming responsibility for one's actions" and "increasing one's capacity for self-control" are essential requirements for mental health (Andrews, 1989, p. 8).

There have also been numerous calls for mental health professionals to explore the relationship between morality and mental health, and to integrate character development into the therapeutic process. Waring (2012) has argued that psychotherapy not only should aim to alleviate mental disorders, but also to cultivate good character in patients. This sentiment is similarly echoed by Martin (2006; 2012), who has referred to this as an integrated moral-therapeutic perspective, and Andrews (1989) who refers to ethical therapy. Andrews even documents his own experience of ethical therapy, describing it as a personal revelatory inspiration for his book. As Andrews tried to make the case for telling a white lie, his psychologist conveyed that trying to manipulate somebody else by lying might hurt him, not in some kind of afterlife justice, but in the here and now. He specifies that "lying, if I took the trouble to be aware of it, was really a terrible psychological state. My vision dimmed, my pulse quickened anxiously, and there was a noticeable loss of contact with the outside world, all this in addition to any long-term physical effects of stress" (p. 4). After this realisation, he made a concerted effort to consistently tell the truth and his life significantly improved.

The various advocates of this so-called moral therapy all have different perspectives on the benefits of morality and how it might be integrated in a

psychotherapeutic setting, but all seem to agree that morality can address certain difficulties that traditional psychotherapy cannot address as effectively. That is, they agree that there seems to be something about morality itself that is protective/curative. However, without a systematic research program, it is not possible to isolate and identify the salubrious effects of moral development and the mechanisms by which morality increases well-being, or to develop interventions that take advantage of this knowledge.

Explaining the Benefits of Morality

In harmony with these ancient systems of morality based on enlightened self-interest, modern research in psychology provides ample evidence to suggest that there is an association between behaviours that would normally be considered 'moral' and well-being. Indeed, there is now an abundant literature demonstrating a positive link between happiness and prosocial behaviours such as donating money and doing volunteer work (Borgonovi, 2008; Phelps, 2001; Post, 2005). Helping others also is a significant predictor of mental health (Schwartz et al., 2003). These findings have been extended to intervention studies, in which deliberate daily acts of kindness were shown to increase life satisfaction (Buchanan & Bardi, 2010).

There are two common explanations for the relationship between virtue and well-being. One explanation is that virtuous individuals are happier because virtuous behaviour tends to be rewarded with higher social status, respect, or social connection (Hardy & Van Vugt, 2006; Stavrova et al., 2013). In other words, acting virtuously is only useful insofar as it garners social rewards. Therefore, virtue is only indirectly related to well-being and mental health, insofar as the virtuous behaviour results in positive social consequences such as respect, influence, or power. Indeed, altruistic behaviour in

general is associated with mental health benefits and protective effects, including deeper social integration, enhanced sense of meaning, and greater well-being (Post, 2005). A consequence of this theory is that acting virtuously is only perceived as beneficial if it garners social rewards. Therefore, in societies that do not reward virtue, virtuous people are not likely to experience these benefits. Evidence for this view has been demonstrated by showing that virtuous people are not happier than anyone else in countries where citizens accept fraud, dishonesty, and free-riding (Stavrova et al., 2013).

The second view is closer to the ancient views of morality held by Aristotle and Patanjali: there is something about moral virtue itself that is inherently rewarding and healthy (Andreoni, 1990). Although this view has been pervasive through history, evidence to support it is limited, partially because it is difficult to isolate the social rewards of virtuous behaviour from the inherent reward of virtuous behaviour. However, it has been shown that spending money on others is a better predictor of happiness than spending money on oneself (Dunn et al., 2008), even if the spending is done anonymously (Aknin et al., 2013).

Moreover, simple acts of kindness have been shown to increase life satisfaction (Buchanan & Bardi, 2010). Happiness also is associated with less self-focused attention (Green et al., 2003), indicating that one benefit of altruistic behaviour may be the result of other-focused attention.

In line with the enlightened self-interest perspective, there is some evidence for the proposition that ethical standards themselves can be beneficial to mental health. For instance, individuals with strict standards preventing fraudulent behaviour tend to be more satisfied with life than those with more permissive attitudes (Helliwell, 2003;

James, 2011). In the following section, the reconciliation model of moral centrality will be proposed as a potential framework for understanding the relationship between morality and mental health that is harmonious with this second view. Specifically, the integration of agency and communion may be adaptive because it represents an internal equilibrium between two mutually opposing drives that energize, rather than interfere with, each other.

The Reconciliation Model of Moral Centrality

The reconciliation model of moral centrality was developed to explain moral motivation. Most early research on morality focused on the importance of moral reasoning, but a seminal review by Blasi (1980) showed that highly developed moral reasoning alone plays only a small role in predicting moral behaviour. More evidence for this came through Colby and Damon's (1992) qualitative study of moral exemplars. In their study, they selected people who were recognized to be highly moral based on a strict criteria of moral excellence, which were formulated through collaborations with theologians, philosophers, and moral scholars. Their analysis revealed that people with lifelong commitments to moral causes do not necessarily have more sophisticated moral reasoning. Indeed, they found that their moral reasoning scores, based on Kohlberg's moral dilemmas, were not much higher than those of non-exemplars. This led to a focus on what is now commonly referred to as the judgment-action gap, which describes how people often know the right thing to do, but do not necessarily act in accordance with that knowledge (Walker, 2004). There will always be times when moral obligations demand that people make real sacrifices and act against their own interests, so what happens when doing the “right thing” is at their own expense?

In response to this problem, Blasi (1984) and Damon (1984) developed theories based on the seemingly paradoxical concept that people act morally *because* of their sense of self. Blasi's self-model explains how moral judgment leads to moral action, and consists of three components: *responsibility*, *self-consistency,* and the *moral self*. According to this model, for a person to act morally, certain actions must be seen as moral, but also as actions that the individual is responsible for doing. Such judgments of responsibility come from differences in moral centrality, or the salience of moral values for one's self-concept. Moral centrality then, describes when such moral considerations are central to the way a person sees, and interacts with, the world. The theory holds that a person who has developed moral centrality will desire to act in a way that is consistent with their sense of self to avoid the cognitive dissonance that would result from acting in a way that contradicts their identity as a moral person. In essence, moral behaviour is explained by the degree to which a person has developed moral centrality, which causes them to feel responsible for acting morally and influences them to remain consistent with their self-concept.

Blasi's self-model is the most comprehensive and systematic approach to explaining how moral cognition leads to moral action, but it does not explain how moral centrality develops. Congruent with Blasi's self-model, Damon (1984) developed a theory to explain the mechanism by which people achieve moral centrality. Damon conceived of the moral and self-systems as conceptually distinct systems that "may or may not be coordinated for any particular individual." Consistent with the duty-based paradigm of morality, morality can be conceived of as an "externally induced constrainer of the antisocial, yet very real, desires of the self" (Damon, 1984, p. 110). Consistent with the

enlightened self-interest paradigm, morality can also be coordinated with self-interest so that it is perceived as "the safest and most gratifying rout toward one's enlightened self-interest" (Damon, 1984, p. 110). Part of what distinguishes morally developed people (i.e., moral exemplars), according to this theory, is that they have integrated these conceptually distinct systems by developing moral centrality. In essence, moral centrality is developed when one's self and moral systems are successfully coordinated and integrated.

Evidence for this model of moral centrality was demonstrated in Damon and Colby's qualitative study of moral exemplars. In their book, *Some Do Care: Contemporary Lives of Moral Commitment* (1992), they identified and interviewed 23 individuals who were deemed by "twenty-two moral philosophers, theologians, ethicists, historians and social scientists" as fitting the criteria for being a moral exemplar. What characterizes the most highly moral people, they found, is the unification of their self and morality: "These men and women have vigorously pursued their individual and moral goals simultaneously, viewing them in fact as one and the same" (Colby and Damon, 1992, p. 300). Of most importance is that none of the moral exemplars "saw their moral choices as an exercise in self-sacrifice" (p. 300). Colby and Damon ultimately saw that moral exemplars experience acting morally as acting in one's own interest.

Frimer and Walker (2009) formulated the reconciliation model of moral centrality to clarify the exact nature of the relationship between the moral and self systems by reconciling two opposing viewpoints. The first view, which they refer to as the *interference hypothesis*, is that the communal and agentic drives are fundamentally opposed to each other: Agency interferes with other-advancing communal motives and

thus must be quelled in order to achieve moral excellence. This perspective was held by psychologists such as Bakan (1966) and Schwartz (1992). Schwartz developed a system of ten universal values, and he found that people with values such as benevolence and self-transcendence were less likely to hold self-interest related values. Like Bakan, he concluded that self-interest and benevolence were mutually exclusive, and that self-interest needed to be subdued for people to become moral.

The second view, which Frimer and Walker (2009) refer to as the *synergy hypothesis*, maintains that morality is communally motivated, but construes agency as an inherently amoral force. According to this view, agency only serves to energize motives, regardless of whether they are moral or not. Agency provides energy to, but does not fundamentally direct, motivation.

The reconciliation model of moral centrality combines insights from both interference hypothesis and the synergy hypothesis. Similar to the interference hypothesis, the reconciliation model of moral centrality holds that agency and communion are normally opposing drives that develop separately and which are often at odds with each other. According to the model, at some point during adolescence, the individual has to choose between either abandoning agency, abandoning communion, or integrating them in a sort of Ericksonian crisis. Consistent with the synergy hypothesis, these systems can be coordinated and integrated, which represents the successful resolution of this Ericksonian crisis.

Moral centrality then, describes this state in which agency and communion are integrated and highly developed. The successful integration of these drives leads to a symbiotic relationship in which the self and moral systems energize each other. In other

words, moral centrality describes a state in which communion is a deeply held belief that becomes part of one's self-concept. Thus, holding community promoting values is no longer perceived as a sacrifice. Rather, the object of agency becomes the realization of communal goals, and conversely, breaching these values becomes an aggression on the self.

To test this theory, Frimer and Walker (2009) developed and validated the first empirical measurement of moral centrality – the values embedded in narrative (VEIN). A VEIN can be understood as a value that is implicitly or explicitly endorsed in someone's speech. VEINs are coded according to the values in Schwartz's Value Survey (SVS; Schwartz, 1992), which captures ten universal value types: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security. These values are separated into quadrants, which are placed around a circumplex so that values on the opposite side of the circumplex are conceptually opposed to each other. Schwartz labels two conceptually opposed quadrants as self-enhancement and self-transcendence, but we use the terminology of agency and communion to stay consistent with Frimer and Walker (2009). The self-enhancement values of achievement (*personal success and competence*) and power (*dominance and wealth*) make up the category of agency. The self-transcendent values of benevolence (*concern for others*) and universalism (*concerns for generalized others and the environment*) make up the category of communion. These values are differentiated by the object of concern, where benevolence is focused on the welfare of one's own group, and universalism is focused on the welfare of all people and nature.

To measure moral centrality, the VEIN coding system is applied to self-narrative data, and the interweaving of agentic and communal themes in the same thought is treated as "an empirical projection of the latent moral centrality construct" (Frimer & Walker, 2009, p.1671). Moral centrality is represented by the frequency with which these themes tend to appear together rather than separately. It is also important to note that, in contrast to previous methods that measure the prevalence of these themes on a macro-level, the emphasis rests on how these themes are integrated in a single thought. Thus, a high prevalence of agentic and communal themes in a narrative would not indicate moral centrality if these themes are associated with different trains of thought and entertained separately.

In line with the reconciliation model, the tendency to coordinate agentic and communal values has been shown to be associated with various aspects of morality. In one study, this tendency positively predicted moral behaviour (Frimer & Walker, 2009). In a second study, recipients of a national award for either volunteerism or advancing humanitarian causes were more likely to integrate agentic and communal themes within their personal narratives compared to a demographically matched control group (Frimer et al., 2011). These findings indicate that agency and communion can be adaptively reconciled, and that this reconciliation is associated with moral and prosocial behaviour.

These findings highlight the utility of this coding system as a measurement of moral development. The VEIN coding system also has several properties that make it especially valuable as a measurement of morality. First, participants are unaware of the construct being measured, which reduces demand characteristics. Second, because participants are blind to the coding system, it reduces problems related to social

desirability; participants would not know how to make themselves look better even if they wanted to. The VEIN method ultimately offers a way of measuring a person's moral motivations without ever cuing them to think about their own personal morality or even the fact that morality is being measured.

The VEIN method also can discriminate people who are perceived as moral exemplars. Frimer et al. (2012) asked 102 social scientists to evaluate the moral qualities of people in a TIME magazine list of the 20th century's most influential figures. In a second study, they separated the 15 highest-scoring individuals to form a moral exemplar group and the 15 lowest-scoring exemplars to compose a control group. Using the VEIN method to analyze their speeches, they correctly predicted that people in the moral exemplar group would exhibit more integration of agentic and communal motives in their speeches than the lowest 15, thus providing evidence for the concurrent validity of this method. This finding is important because moral virtue is a complex and multifaceted construct that cannot be measured or defined with any single metric. Thus, one standard for determining whether someone embodies virtue is the court of public opinion, and this study demonstrates that this measurement of moral centrality is harmonious with the court of public opinion.

Moral Centrality and Mental Health

Although the reconciliation model was developed to understand moral development, it can also be used as a general framework for examining the relationship between morality and mental health. Frimer and Walker (2009, p. 1671) write that “as each motive becomes more elaborated and increasingly central to the individual, the two conflicting motivational systems come into strive; their segregated coexistence produces

an unsustainable crisis." This tension becomes a source of internal disequilibrium that can be resolved in one of three ways: denying agency, denying communion, or attempting to reconcile the two motivational systems. Moral centrality represents a successful negotiation between the agentic and communal motivational systems that has been integrated into one's personality.

The reconciliation model also provides an indication of how moral development might contribute to well-being. Not only does the development of moral centrality result in a reduced internal disequilibrium within a person's motivational system, but the nature of this integration is synergistic. As described by Frimer and Walker, "agency 'breathes life' into communion and communion gives agency a greater purpose" (Frimer and Walker, 2009, p. 1677). So rather than finding a way for the opposing motivational systems to negotiate, reconciliation describes a state in which the opposing motivations support and energise each other. Thus, the coordination of opposing drives may become a naturally symbiotic source of energy: communion galvanizes agency, which exerts itself in a way that enhances social relationships, which in turn engenders more agentic energy. If this is the case, the development of moral centrality should promote the optimal satisfaction of these drives with less energy.

Finally, the reconciliation model may also show how moral centrality can promote the attainment of eudaimonic well-being specifically. As described above, the eudaimonic perspective of well-being consists in the actualization of one's true potential as a human being (Waterman et al., 2010). Huta (2013) defines the eudaimonic orientation as "seeking to use and develop the best in oneself, in ways that are congruent with one's values and true self." In contrast with hedonia, the pursuit of pleasure as an

end in itself, positive subjective experiences are a byproduct, not the goal, of eudaimonic pursuits. Eudaimonic well-being can be broadly understood then, as the degree to which this way of living has successfully been attained. As with the reconciliation model of moral centrality, this definition implies agency oriented motivations of self-development that are in-line with deeply held beliefs about how one should relate to others and act in the world, which can be understood as communal values. If moral centrality describes the synergistic integration of agentic and communal drives, it follows that higher moral centrality should more easily allow for the attainment of eudaimonic well-being, along with the positive subjective experiences with which it is associated.

The Present Study

In the present study, the relationship between moral centrality and mental health was assessed. University students completed a battery of open-ended questions in which they wrote about their values, life goals, and personal strivings. This was followed by a battery of self-report measures assessing depression, self-esteem, anxiety, the presence of meaning in their lives, positive and negative affect, interpersonal functioning, and overall well-being. The open-ended questions were coded using the VEIN system, which codes for themes of agency and communion using the constructs in Schwartz's Value Survey (1992). Consistent with Frimer and Walker's (2009) work, moral centrality was operationalized as the degree to which participants wove together themes of agency and communion into their writing.

In addition, a self-report measure of altruistic behaviour was administered. As previously discussed, an abundance of research has shown that prosocial behaviour is associated with positive psychological effects (Borgonovi, 2008; Phelps, 2001; Post,

2005). Therefore, to control for the expected psychological benefits of prosocial behaviour, a self-report measure of altruistic behaviour was used to control for these psychological benefits.

Research Questions and Aims

The proposed study was designed to answer the overarching research question: Is moral centrality associated with healthy psychological functioning? In relation to this question, the proposed research addressed the three following research questions: First, does overall moral centrality predict markers of mental health and well-being? Second, is this association maintained after controlling for the potential positive effects of altruistic behaviour? Third, which aspects of mental health, if any, are most associated with the development of moral centrality?

Hypothesis 1. The integration of agency and communion will positively predict well-being, the presence of meaning in life, positive affect, and self-esteem; and negatively predict depression, anxiety, negative affect, and interpersonal problems.

Hypothesis 2. The integration of agency and communion will account for variance in these markers of well-being and mental health after controlling for any association with altruistic behaviour.

CHAPTER II.

Methodology

Design

This survey used a multiple regression analysis to test the research hypotheses. The predictors were the moral centrality index (MCI) and self-reported altruism (SRA). The outcome variables were depression (BDI), state and trait anxiety (STAI-S and STAI-T), positive and negative affect (PANAS-P and PANAS-N), the presence of meaning in life (MLQ-P), self-esteem (RSES) and well-being (QEWB). Altruism was used to statistically control for the potential effects of altruistic behaviour on mental health.

Participants

Participants were recruited from the University of Windsor Participant Pool. Because the aim of this study was to test whether the development of moral centrality is associated with mental health and well-being, there were no explicit inclusion criteria. In total, 130 participants completed the online survey. 112 of the participants identified as female, 16 identified as male, and the gender of 2 participants was unknown. The mean age of participants was 21.47 years (SD = 4.28, range = 18-43 years). Reported ethnic background was as follows: 5.2% African, 4.3% Canadian, 5.3% East Asian, 69.0% European, 0.8% First Nations, 3.1% Middle Eastern, 2.6% Mixed Ethnicity, 5.2% South Asian, and 0.8% South or Central American. In terms of years of education, 17.69% were in first year, 23.84% were in second year, 26.15% were in third year, 26.92% were in fourth year, and 5.38% had attended university for more than four years.

Measures

Demographic Questionnaire. Demographics were collected using questions about age, gender, marital status, ethnicity, and family background.

Beck Depression Inventory-II (BDI-II; Beck et al., 1996). The Beck Depression Inventory–Second edition (BDI-II) is a 21-item self-report measure that assesses the severity of cognitive, affective, and neurovegetative symptoms of depression. Participants respond by indicating the degree to which each item accurately represents the severity of the symptom over the past 2 weeks. Items such as "sadness" and "loss of interest" are rated on a scale from 0 (*absence of symptom*) to 3 (*severe level of symptom*). Higher scores indicate greater depressive symptoms. In the present study, internal consistency for the BDI-II was .94.

Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). The Positive and Negative Affect Schedule (PANAS) is a 20-item self-report measure that assesses positive and negative affect. The items are arranged in two subscales. The positive affect (PA) subscale includes items such as "inspired", whereas the negative affect (NA) subscale includes items such as "jittery". The state version of this scale was used in the present study, with participants reporting how they feel "right now, that is, at the present moment." Participants respond using a 5-point scale ranging from 1 (*very slightly or none at all*) to 5 (*extremely*), with higher scores indicating greater positive or negative affect. In the present study, internal consistency for the negative affect subscale was .93 and .92 for the positive affect subscale.

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965; 1979). The Rosenberg Self-Esteem Scale (RSES) is a 10-item self-report measure that assesses trait

self-esteem. Items such as "On the whole I am satisfied with myself" are scored on a 4-point scale ranging from 0 (*strongly disagree*) to 3 (*strongly agree*). Higher scores reflect higher trait self-esteem. In the present study, internal consistency for the RSES was .92.

The Questionnaire for Eudaimonic Well-Being (QEWB; Waterman et al., 2010). The Questionnaire for Eudaimonic Well-Being (QEWB) is a 21-item self-report measure that assesses six facets of eudaimonic well-being: meaning, self-expression, intense involvement in activities that contribute to life goals, sense of accomplishment and investment of effort. Items such as "My life is centered around a set of core beliefs that give meaning to my life." are scored on a 5-point scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). Higher scores reflect higher eudaimonic well-being. In the present study, internal consistency for the QEWB was .88.

The State-Trait Anxiety Inventory (STAI; Spielberger & Gorsuch, 1983). The State-Trait Anxiety Inventory (STAI) is a 40-item self-report measure that assesses state and trait anxiety symptoms. The items are divided into two subscales. The state subscale instructs participants to report how they feel at the present moment and it includes items such as "I am worried." Participants respond on a scale from 1 (*not at all*) to 4 (*very much so*). The trait subscale instructs participants to report how they generally feel, and it includes items such as "I worry too much over something that doesn't really matter." Participants respond on a scale from 1 (*almost never*) to 4 (*almost always*). Higher scores indicate greater anxiety symptoms. In the present study, internal consistency for the state subscale was .94 and the .94 for the trait subscale.

The Meaning in Life Questionnaire (MLQ; Steger, 2006). The MLQ is a 10-item measure of life meaning that consists of two subscales: the Presence of Meaning in

Life (MLQ-P) and the Search for Meaning in Life. Only the Presence of Meaning subscale is used in the present study. The Presence of Meaning in Life subscale includes items like "My life has a clear sense of purpose," and are rated on a 7-point scale from 1 ("absolutely untrue") to 7 ("absolutely true"). Items are summed to obtain a total and higher scores reflect the presence of meaning. In the present study, internal consistency for the Presence of Meaning subscale was .89.

The Inventory of Interersonal Problems-32 (IIP-32; Horowitz et al., 2000). The Inventory of Interpersonal Problems (IIP) is a 32-item self-report measure that assesses interpersonal difficulties. The items comprise eight subscales that correspond to the eight octants of the interpersonal circumplex (Kiesler, 1996): domineering/controlling (DC), vindictive/self-centered (VS), cold/distant (CD, socially inhibited (SI), non-assertive (NA), overly accommodating (OA), self-sacrificing (SS), and intrusive/needy (IN). Items such as, "I am affected by another person's misery too much" are rated from 0 (*not at all*) to 4 (*extremely*). Higher scores indicate greater interpersonal problems. In the present study, internal consistency for the sum of IIP-32 subscales was .95.

Self-Report Altruism Scale (**SRA**; Rushton et al., 1981). The SRA is a 20-item self-report measure of altruistic behaviour, measuring the frequency with which the respondents engage in altruistic acts. Items like "I have given money to charity" are rated on a 5-point Likert scale from 1 ("never") to 5 ("very often"). Higher scores indicate more frequent self-reported pro-social behaviour. In the present study, internal consistency for the SRA was .88.

Validity checks. A total of four validity checks were used to screen for careless responding. To ensure participants are reading the items, the IIP-32, BDI-II, RSES and

SRA each had an item added that instructed participants to select a particular response. For example, "*If you have read this statement, please select 'Mostly Disagree'*."

Modified Personal Strivings List (MPSL). The personal strivings list is an open-ended template designed to elicit a person's characteristic motives and personal strivings. It is based on the Personal Strivings List (PSL; Emmons, 1999), but has been modified to incorporate queries for each response. Each response is followed by a query asking why a particular goal or value is important to the participant. The PSL has been shown to be effective in eliciting expressions of agentic and communal motivation (Frimer et al., 2011).

Personal Values and Goals (PVG). The PVG consists of eight open-ended questions asking about personal values and life goals. Each question is followed by a query asking why a particular goal or value is important to the participant. Many questions are modified from the Self-Understanding Interview, Transmogrified (Frimer & Walker, 2009) so that they can be answered online without the need for queries from an interviewer.

Values Embedded in Narrative Coding Manual (VEIN; Frimer et al., 2009). The VEIN coding manual contains instructions for evaluating the implicit value orientations of participants using the Values Embedded in Narrative coding procedure. This procedure was developed to code implicitly endorsed values, based on Schwartz's ten universal values (1992), from a personal narrative. The coding manual provides a basic definition of each value, along with specific inclusion and exclusion criteria for coding each VEIN from narrative. According to the manual (Frimer et al., 2009), inter-

rater reliability for the relevant VEINS in this study have been substantial (89% to 95% agreement, $\kappa = 67$ to 82).

Responses are separated and referred to using a word that characterizes the response, called a 'stem'. For instance, ' baseball' may be the stem for a paragraph on why someone likes to play baseball. The basic unit of analysis is referred to as a chunk, which consists of a single response stem along with any associated elaboration on its significance to the participant (e.g., any response to a follow-up question like “Why is ___ important to you?”). The rater then analyzes each chunk and determines which values are present according to the criteria explicated in the VEIN coding manual. In the present study, stems were used only if the participant developed two conceptually distinct themes in answering a single question. Otherwise, chunks were identified using the associated question number (e.g., MPSL-1). See Appendix M and Appendix N for the complete list of questions.

Procedure

This study consisted of a single online questionnaire with two parts: a series of open-ended questions, followed by a series of self-report measures. Participants were recruited from the University of Windsor Participant Pool system and given 1.5 course credits for participation. Participants were told that the purpose of the study was to better understand how personal narratives and values relate to well-being. Before completing the survey, participants were provided with an informed consent form. They indicated their consent by typing in their name.

After indicating their consent, participants completed the online survey, which took an hour and a half, and was worth 1.5 bonus points. For each open-ended response,

the participant was prompted to give a short explanation about their answer. The open-ended questions were followed by the battery of self-report measures listed above. At the end of the survey, participants were shown the Post-Study Debriefing Form (Appendix C), which explained the purpose of the study. Participants signed the bottom of the debriefing form to indicate their consent to data retention after being told the true purpose of the study.

VEIN Coding Procedure. The implicit value orientation of the participants was coded using the VEIN coding manual to analyze the open-ended questions. Responses are separated and referred to using a word that characterizes the response, called a 'stem'. For instance, ' baseball' may be the stem for a paragraph on why someone likes to play baseball. The basic unit of analysis is referred to as a chunk, which consists of a single response stem along with any associated elaboration on its significance to the participant (e.g., any response to a follow-up question like “Why is ___ important to you?”). The rater then analyzes each chunk and determines which values are present according to the criteria explicated in the VEIN coding manual. Each chunk is coded for every VEIN, so it is possible for a single chunk to endorse multiple values. In the present study, stems were used only if the participant developed two conceptually distinct themes in answering a single question. Otherwise, chunks were identified using the associated question number (e.g., MPSL-1). See Appendix M and Appendix N for the complete list of questions.

Moral centrality was coded by calculating the frequency with which participants interweave themes of agency and communion in the same chunk. See Appendix L for an example of how chunks were coded. All coding was performed by the primary investigator and a single research assistant who was trained by the PI to code narrative

chunks using the VEIN coding manual (Frimer et al., 2009). The PI and research assistant practiced coding each VEIN using examples provided in the VEIN coding manual and then met in-person on three separate occasions to discuss disagreements.

Reliability. After three in-person training sessions and a single online video discussion, inter-rater reliability for value coding was assessed using a subset of the collected data that would not be included in the final study. In total, this subset included 155 chunks. Across the four VEINs, reliability was substantial (90% to 96% agreement, κ = 72 to 81), and exceeded the minimal requirements recommended in the coding manual (Frimer et al., 2009).

Metrics for moral centrality coding. Each participant's pattern of responses on the open-ended questions were organized in a data matrix which formed a unique profile of the participant's implicitly endorsed values. Responses were organized by the question number, and further divided into stems if the participant developed two conceptually distinct themes in response to a single question. Responses were listed in the rows and VEINS along columns (see Appendix L for an example). The cells were filled with 1's to signify the presence of a VEIN, and 0's to signify the absence of a VEIN. Summary scores for each column were calculated by dividing the total number of hits by the number of stems for that individual. These summary scores were interpreted as measurements of the degree to which those values are important to the individual.

An additional series of columns were used to measure agency, communion and moral centrality. The agency column recorded if either power or achievement was contained in the chunk and the communion column recorded if either benevolence or universalism was coded from the chunk. Summary scores were calculated in the same

way as described above. The moral centrality column recorded the frequency with which a person integrated agentic and communal themes in the same sentence fragment. The moral centrality index (MCI) was calculated as the probability of overlap between agency and communion when at least one of the values was present. This number was multiplied by 100 to give the frequency with which a person integrates agentic and communal themes in their narratives, with a higher number representing more integration. For example, an MCI of 75 indicates that agency and communion appear together 75% of the time. Thus, MCI scores may theoretically range between 0 and 100. This process was repeated for all possible agency-communion VEIN combinations for the purpose of exploratory analysis. These combinations include *power-benevolence*, *power-universalism*, *achievement-universalism* and *achievement-benevolence*.

CHAPTER III.

Results

Approach to Data Analysis

All statistical analyses were performed using R for Linux (Version 3.6.3). First, the data were examined for out of range values. Answers to validity check questions and missing responses then were examined. Next, the assumptions of multiple regression were assessed along with a descriptive analysis of relevant variables.

Data Cleaning

Validity check. The data were first checked for invalid cases. Eleven participants failed at least one of the four validity check items for inattentive responding and were removed from subsequent analysis. After these cases were removed, 119 cases were retained for subsequent analyses. A power analysis was subsequently performed to calculate the potential for Type II error. Assuming a medium effect size ($f^2 = .13$), with a sample size of 119 and two predictors, the calculated power was .95.

Imputation of missing values. After the removal of invalid cases, less than 0.1% of values were missing on each individual measure. Given the scarcity of missing responses, mean substitution was deemed to be an appropriate solution (Tabachnick & Fidell, 2007). Missing responses were replaced with item-level response means based on all non-missing scores.

Assumptions of Multiple Regression

Prior to the main analysis, the assumptions of multiple linear regression were evaluated. The data were first examined for homoscedasticity of residuals and linearity. Visual inspection of standardised residual vs predicted residual plots revealed that

residuals were randomly scattered above and below the zero-residual line. Scatterplots did not reveal any non-linear patterns. Therefore, homoscedasticity and linearity were assumed to have been met.

The assumption of normality was assessed by standardized scores for skewness and kurtosis with a cut-off of $z = | 3.29 |$, and the Shapiro-Wilke statistic. Investigation revealed that STAI-S, STAI-T, QEWB and SRA passed *S-W* with skewness and kurtosis both in the normal range. PANAS-P, MLQ-P, RSES, IIP-32 and MC all violated *S-W,* but skewness and kurtosis remained in the normal range. The variables BDI-II and PANAS-N both violated *S-W* and were significantly positively skewed. Univariate normality is not an explicit assumption of multiple regression (Tabachnick & Fidell, 2007), so no transformations were performed. Descriptive statistics for all measures are shown in Table 1.

Table 1

Descriptive Statistics for All Measures

Variable	*M*	*SD*	Median	Range
BDI-II	14.12	11.44	11	0 - 50
QEWB	74.27	11.01	74	44 - 103
STAI-State	43.83	12.10	43	20 - 75
STAI-Trait	44.82	11.88	45	22 - 71
RSES	19.39	5.95	19	5 - 30
PANAS-P	27.97	9.37	29	11 - 47
PANAS-N	19.08	8.50	16	10 - 44
SRA	54.70	11.9	53	31 - 88
MLQ-P	24.61	6.17	25	10 - 35
IIP-32	18.64	5.21	19.25	8 - 28.67
MCI	26.62	16.68	25	0 - 75

Note. BDI-II = Beck Depression Inventory II; QEWB = Questionnaire for Eudaimonic Well-Being; STAI-S = State-Trait Anxiety Inventory (State); STAI-T = State-Trait Anxiety Inventory (Trait); RSES = Rosenberg Self-Esteem Scale; PANAS-P = Positive and Negative Affect Schedule (Positive Affect); PANAS-N = Positive and Negative Affect Schedule (Negative Affect); SRA = Self-Report Altruism Scale; MLQ-P = Meaning in Life Questionnaire (Presence); IIP-32 = Inventory of Interpersonal Problems (Total); MCI = Moral Centrality Index.

Based on a cut-off of $z = |3.29|$, one BDI score was a univariate outlier and was winsorized by changing it to the highest non-outlier BDI value. Outliers on independence of observations were then inspected using Mahalanobis distance. None of the observations exceeded the Mahalanobis distance cutoff ($\chi^2 = 13.82$, $p < .001$), and thus all cases were retained. No influential cases were detected using Cook's distance for any of the regression models, and thus all cases were retained. Multicollinearity was examined next using variance inflation factors and intercorrelations. Bother predictor variables were well below the cutoffs of VIF < 10 and tolerance < .1 (VIF = 1.02, tolerance = 0.98) , and their correlation was below the $r = |.80|$ cutoff. Thus, the assumption of no multicollinearity was met. Full descriptive statistics and zero-order correlations are shown in Table 2.

Table 2

Zero-Order Correlations for All Variables

Variable	1	2	3	4	5	6	7	8	9	10
1. BDI-II										
2. QEWB	-.49**									
3. STAI-State	.77**	-.51**								
4. STAI-Trait	.79**	-.55**	.88**							
5. RSES	-.65**	.57**	-.65**	-.78**						
6. PANAS-P	-.41**	.46**	-.38**	-.41**	.37**					
7. PANAS-N	.63**	-.33**	.71**	.65**	-.49**	.08				
8. SRA	.06	.26**	-.01	-.01	.06	.23*	.08			
9. MLQ-P	-.48**	.66**	-.51**	-.59**	.57**	.49**	-.21*	.10		
10. IIP-T	.48**	-.31**	.51**	.59**	-.46**	-.06	.47**	.22*	-.25**	
11. MCI	-.20*	.36**	-.32**	-.26**	.26**	.14	-.22*	.15	.14	-.10

Note. BDI = Beck Depression Inventory II; QEWB = Questionnaire for Eudaimonic Well-Being; STAI-State = State-Trait Anxiety Inventory (State); STAI-Trait = State-Trait Anxiety Inventory (Trait); RSES = Rosenberg Self-Esteem Scale; PANAS-P = Positive and Negative Affect Schedule (Positive Affect); PANAS-N = Positive and Negative Affect Schedule (Negative Affect); SRA = Self-Report Altruism Scale; MLQ-P = Meaning in Life Questionnaire (Presence); IIP-T = Inventory of Interpersonal Problems (Total); MCI = Moral Centrality Index.

Main Analyses

To test the hypotheses, separated hierarchical multiple regression analyses were conducted for each of the dependent variables: depression (BDI-II), state and trait anxiety (STAI-S and STAI-T), positive and negative affect (PANAS-P and PANAS-N), self-esteem (RSES), the presence of meaning (MLQ-P), well-being (QEWB) and interpersonal problems (IIP-32). For each model, altruism (SRA) was entered in the first step to control for the potential effects of altruistic behaviour. It was retained in the final regression model only if it significantly contribution to the model. Otherwise, it was removed. The moral centrality index (MCI) was entered in Step 2 to determine whether it accounted for unique variance over and above normal measurements of altruistic behaviour. Following Rothman (1990), familywise error-rate corrections were not used for a priori generated hypotheses.

Depression. The first regression model examined depression. It was hypothesized that moral centrality would negatively predict depression scores after accounting for the effect of altruistic behaviour. Altruism was entered as a first step but did not significantly contribute to the regression model (p = .500), and therefore was removed from the model. The model containing only moral centrality as a predictor was significant $F(1,117)$ = 5.07, p = .026. As hypothesised, higher moral centrality was associated with reduced depression, β = -.20, $t(117)$ = -2.25, p = .045.

Table 3

Final Regression Model for Beck Depression Inventory II

Predictor	*b*	*SE b*	*b* 95% CI	*β*	*t*	*Sig.*	*R*	R^2
(Intercept)	17.84	1.95	[13.98, 21.70]	-	9.16	<.001	-.20	.042
MCI	-0.14	0.62	[-.26, -0.02]	-0.20	-2.25	.026		

Note. MCI = Moral Centrality Index

Eudaimonic Well-Being. The next regression analysis examined well-being. It was predicted that moral centrality would positively predict well-being after accounting for the effect of altruistic behaviour. Step 1 of the model was significant, $F(1,117) = 8.67$, $p = .004$, and accounted for 6.9% of the variance in well-being. In Step 2, adding moral centrality significantly improved the prediction of well-being, $\Delta F(1,116) = 14.30$, $p < .001$, accounting for an additional 10.2% of the variance. The complete model accounted for 17.1% of the variance in well-being (refer to Table 3 for a full summary of the model).

Table 4

Final Regression Model for Well-Being

	Predictor	*b*	*SE b*	95% CI	*β*	*t*	*Sig.*	*R*	R^2	*ΔR*
1	(Intercept)	60.97	4.62	[51.83, 70.12]		13.2	<.001	.26	.069	
	Altruism	0.24	0.08	[0.08, 0.41]	0.26	2.95	.003			
2	(Intercept)	57.77	4.46	[48.94, 66.60]		12.96	<.001		.171	.102
	Altruism	0.20	0.08	[0.04, 0.35]	0.21	2.50	.014	.26		
	MCI	0.21	0.06	[0.10, 0.33]	0.32	3.78	<.001	.36		

Note. MCI = Moral Centrality Index

State Anxiety. It was hypothesized that moral centrality would negatively predict anxiety scores after accounting for the effect of altruistic behaviour. Altruism did not significantly predict state anxiety ($p = .947$) and was removed from the final model. The model containing only moral centrality as a predictor was significant, $F(1,117) = 13.38$, $p < .001$. As hypothesised, higher moral centrality was associated with reduced state anxiety, $\beta = -.32$ $t(117) = -3.66$, $p < .001$.

Table 5

Final Regression Model for State Anxiety

Predictor	*b*	*SE b*	95% CI	*β*	*t*	*Sig.*	*R*	R^2
(Intercept)	50.02	1.99	[46.07, 53.96]		25.10	<.001	-.32	.103
MCI	-0.23	0.06	[-0.36, -0.11]	-0.32	-3.66	<.001		

Note. MCI = Moral Centrality Index

Trait Anxiety. Altruism did not significantly predict trait anxiety ($p = .944$) and was dropped from the final model. The model containing only moral centrality as a predictor was significant, $F(1,117) = 8.46$, $p = .004$. As hypothesised, higher moral centrality was associated with reduced trait anxiety, $\beta = -.26$ $t(117) = -2.91$, $p < .004$.

Table 6

Final Regression Model for Trait Anxiety

Predictor	*b*	*SE b*	95% CI	*β*	*t*	*Sig.*	*R*	R^2
(Intercept)	49.74	2.00	[45.79, 53.69]		24.93	<.001	-.26	.067
MCI	-0.18	0.06	[-0.31, -0.06]	-0.26	-2.91	.004		

Note. MCI = Moral Centrality Index

Self-Esteem. It was hypothesized that moral centrality would positively predict self-esteem after accounting for the effect of altruistic behaviour. Altruism was entered as a first step but did not significantly contribute to the regression model ($p = 0.488$), and therefore was removed from the analysis. The regression model with moral centrality predicting self-esteem was significant $F(1,117) = 8.63$, $p = .004$. As hypothesised, higher moral centrality was associated with higher self-esteem, $\beta = 0.26$, $t(117) = 2.94$, $p = .004$.

Table 7

Final Regression Model for Self-Esteem

Predictor	*b*	*SE b*	95% CI	*β*	*t*	*Sig.*	*R*	R^2
(Intercept)	16.90	0.99	[14.92, 18.88]		16.92	<.001	.26	.069
MCI	0.09	0.03	[0.03, 0.16]	0.26	2.94	.004		

Note. MCI = Moral Centrality Index

Positive Affect. The next regression analysis tested the hypothesis that moral centrality would predict positive affect after accounting for altruism. Step 1 of the model was significant, $F(1,117) = 6.64$, $p = .011$, and accounted for 5.4% of the variance in positive affect. In contrast to expectations, adding moral centrality in Step 2 did not significantly improve the prediction of positive affect, $\Delta F(1,116) = 1.45$, $p = 0.232$. The complete model is displayed in Table 7.

Table 8

Final Regression Model for Positive Affect

	Predictor	*b*	*SE b*	95% CI	*β*	*t*	*Sig.*	*R*	R^2	*ΔR*
1	(Intercept)	17.98	3.96	[10.13, 25.83]		4.54	<.001		.054	
	Altruism	0.18	0.07	[0.04, 0.32]	0.23	2.58	.011	.23		
2	(Intercept)	17.06	4.03	[9.08, 25.04]		4.23	<.001		.065	.012
	Altruism	0.17	0.07	[0.03, 0.31]	0.22	2.37	.019	.23		
	MCI	0.06	0.05	[-0.04, 0.16]	0.11	1.20	.232	.14		

Note. MCI = Moral Centrality Index

Negative Affect. It was hypothesised that moral centrality would negatively predict negative affect after accounting for the effect of altruistic behaviour. Altruism was entered as a first step but did not a significantly contribute to the regression model (*p*

= 0.414), and therefore was removed from the analysis. The final model with moral centrality predicting negative affect was significant $F(1,119) = 5.94$, $p = 0.016$. As hypothesised, higher moral centrality was associated with lower negative affect, $\beta = -.22$, $t(117) = -2.44$, $p = .016$.

Table 9

Final Regression Model for Negative Affect

Predictor	*b*	*SE b*	95% CI	*β*	*t*	*Sig.*	*R*	R^2
(Intercept)	22.06	1.44	[14.92, 18.88]	-	15.30	<.001	-.22	.048
MCI	-0.11	0.04	[-0.20, -0.02]	-.22	-2.44	.016		

Note. MCI = Moral Centrality Index

Interpersonal Problems. It was hypothesized that moral centrality would be associated with less interpersonal problems after accounting for the effects of altruistic behaviour. Contrary to expectations, altruistic behaviour significantly predicted the presence of interpersonal problems, $F(1, 117) = 5.94$, $p = .016$. The addition of moral centrality did not significantly contribute to the model, $F(1, 116) = 2.12$, $p = .148$.

The Presence of Meaning. It was hypothesised that moral centrality would be associated with a higher sense of meaning in life after accounting for the effect of altruistic behaviour. In contrast to the research hypothesis, regression models were not significant when altruism ($F(1, 117) = 1.14$, $p = .287$) or moral centrality ($F(1, 117) = 2.23$, $p = .138$) were used as predictors.

Exploratory Analysis

Exploratory analyses were conducted to further investigate the relationship between the VEINs and the outcome variables. Given that agency and communion have been shown to be associated with well-being (Garcia et al., 2015), the relationship

between the frequency of each VEIN and the outcome variables were first assessed. To test this, multiple regression analyses were conducted for each outcome variable with all four VEINs (power, achievement, benevolence and universalism) entered as predictors. Power was significantly related to altruism (r = .21, p = .025), well-being (r = .20, p = 0.032), and positive affect (r = .23, p = 0.013). Achievement, universalism, and benevolence were not significantly associated with any of the outcome variables.

VEIN Combinations. To further clarify results, a second exploratory analysis tested all possible agency-communion VEIN combinations as predictors of the main outcome variables. These combinations include *power-benevolence*, *power-universalism*, *achievement-universalism*, *and achievement-benevolence*. As with the moral centrality index, these metrics measure the frequency with which the overlap of these themes occur when at least one of the values is present.

Analyses were conducted using semi-partial Pearson's correlation, controlling for altruism. This resulted in 36 analyses, shown in Table 9 below. Given the large number of conditions, there is a heightened probability of Type 1 error. However, the primary goal of these analyses was to reveal overarching patterns in the data in order to identify whether a specific agency-communion combination accounted for the overall results. Thus, the significance of these associations is used only insofar as they are indicative of a general pattern,

The power-benevolence combination was significantly associated with less state anxiety and increased well-being. The achievement-benevolence combination largely mirrored the associations between moral centrality and the outcome variables. As with moral centrality, achievement-benevolence was associated with less depression, negative

affect, trait and state anxiety, and more self-esteem and well-being. In addition, achievement-benevolence also was associated with increased presence of meaning and decreased interpersonal problems. The correlations between achievement-benevolence and the subscales of the IIP-32 revealed small negative associations ranging from .07 to .16.

Table 10

Semi-Partial Correlations with all Agency-Communion Combinations

Variable	BDI	PANAS-P	PANAS-N	RSES	MLQ-P	QEWB	STAI-State	STAI-Trait	IIP-T
MCI	-.22*	.11	-.23*	.26**	.12	.33***	-.32**	-.26**	-.13
PO-BE	-.16	.13	-.16	.09	.02	.19*	-.21*	-.14	-.04
AC-BE	-.23*	.07	-.24**	.35***	.29**	.37***	-.31***	-.31***	-.20*
AC-UN	.02	.03	-.02	-.01	.10	.07	-.06	-.04	-.06
PO-UN	.00	-.11	-.04	-.04	-.02	-.07	-.03	-.07	.01

Note. BDI = Beck Depression Inventory II; QEWB = Questionnaire for Eudaimonic Well-Being; STAI-State = State-Trait Anxiety Inventory (State); STAI-Trait = State-Trait Anxiety Inventory (Trait); RSES = Rosenberg Self-Esteem Scale; PANAS-P = Positive and Negative Affect Schedule (Positive Affect); PANAS-N = Positive and Negative Affect Schedule (Negative Affect); SRA = Self-Report Altruism Scale; MLQ-P = Meaning in Life Questionnaire (Presence); IIP-T = Inventory of Interpersonal Problems (Total); MCI = Moral Centrality Index; PO-BE = Power-Benevolence; AC-BE = Achievement-Benevolence; AC-UN = Achievement-Universalism; PO-UN = Power-Universalism. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

CHAPTER IV.

Discussion

Moral behaviour has long been associated with well-being, but the nature of this relationship is not fully understood. In this study, the reconciliation model of moral centrality was proposed as a framework for understanding the psychological benefits of morality. According to the reconciliation model, agency and communion are dual motivational systems that are normally in tension, creating an internal disequilibrium. This disequilibrium can result in a suboptimal psychological adjustment caused by the tendency to satisfy one drive at the cost of the other (Frimer & Walker, 2009). According to Frimer and Walker (2009), this state is most adaptively overcome by developing moral centrality, which occurs when agency and communion are reconciled and coordinated whereby the satisfaction of one implies the satisfaction of the other. This resolves the tension in favour of a synergistic integration of agency and communion, whereby agency energizes communion, and communion infuses agency with meaning. If this is the case, moral centrality may also contribute to better mental health and overall well-being.

The overarching purpose of this study was to serve as a first step towards investigating this claim by testing the association between moral centrality, and mental health and well-being. In the present study, moral centrality was operationally defined as the degree to which a person integrates agentic with communal values in narratives about important values. This allows a single action to be construed as satisfying both agentic and communal values simultaneously, thus overcoming the dilemma described above. For instance, participant #42 writes:

> I believe heavily in self betterment and working to be the kindest, strongest (physically, mentally and emotionally) and most well rounded person I can be. Family is my primary motivator, my dream is to be a dad one day, but more importantly I want to be a pillar that can uplift and support my family and always be there when others need me.

This participant is demonstrating moral centrality by interweaving the agentic theme of achievement with the communal theme of benevolence. The participant strives for self-improvement, but the ultimate reason for this self-improvement is so that he can help other people and to be a 'pillar that can uplift and support [his] family.' Thus, by pursuing the normally self-oriented value of achievement, which serves as its own reward, the participant's strivings are infused with additional meaning and purpose. His goal satisfies his needs for competence and for connection with others simultaneously without having to sacrifice one for the other.

Participant #83 similarly demonstrates moral centrality in discussing her motivations for performing well at her job. She writes: "I work with a vulnerable population and continually bettering myself will allow me to be tolerant with them and provide them with the best care that I can." This motivation to do well at her job demonstrates moral centrality because it satisfies her need for achievement while simultaneously giving her the feeling that she is having a positive effect on the world around her.

It was hypothesised that the tendency to weave agentic and communal themes together in narratives about important values and life goals would be associated with markers of mental health and well-being. As predicted, moral centrality was associated

with markers of psychological health such as lower depression, anxiety, and negative affect, and higher well-being and self-esteem. Contrary to expectations, moral centrality was not associated with the presence of meaning in life, positive affect, or lower interpersonal problems. However, these null associations can help to clarify the nature of the relationship between moral centrality and psychological health. Interpretations of these null associations are discussed below.

A secondary aim of this study was to differentiate between the effects of altruism and moral centrality. Whereas altruistic behaviour may incur benefits through social rewards, moral centrality is posited to have intrinsic benefits that do not rely on such rewards. Thus, it was predicted that moral centrality would have a pattern of associations that altruism could not explain. As expected, the overall pattern of results supports the proposition that moral centrality and altruism each relate to mental health and well-being in different ways. In every instance of significant results in the present analyses, the variance explained by altruism and moral centrality did not overlap, and they tended to be associated with different markers of mental health: Whereas moral centrality was uniquely associated with lower depression, anxiety, and negative affect, and with higher self-esteem, altruism uniquely predicted positive affect. In the single case where both moral centrality and altruism contributed to the prediction of an outcome variable (well-being), both predictors uniquely contributed to the regression model. Taken together, these results provide a strong indication that moral centrality and altruism each have different relationships with mental health and well-being.

The finding that positive affect was only associated with altruism also clarifies how the latter differs from moral centrality in terms of their relationships with mental

health and well-being. Altruistic behaviour consists of momentary acts of kindness (Rushton et al., 1981), each of which may produce joy at that moment in time. Similarly, people with a positive disposition may be more likely to engage in altruistic behaviour. A person who has developed moral centrality, however, engages in behaviours that are consistent with their values, regardless of the feelings punctually associated with specific behaviours. For example, ethical conduct often involves difficult choices that may create short term feelings of being conflicted. Moral centrality may thus promote a more long-term feeling of calm and being in balance instead of short-term elation. Indeed, the present results suggest that it is this tendency to act in accordance with deeply held values that is most strongly associated with markers of mental health.

As mentioned above, moral centrality may work similarly to eudaimonic orientations by promoting a sustainable, long-term strategy towards well-being with benefits that accumulate gradually. Similar to the eudaimonic orientation, people with moral centrality make decisions based on their alignment with values rather than for their ability to produce positive affect. This is consistent with the research of Huta and Ryan (2010), who found that pleasure-seeking orientations towards well-being are more closely associated with positive affect than are eudaimonic orientations. It also is consistent with the results of an intervention study published in the same paper. Activities designed to increase pleasure and comfort were related to well-being benefits in the short term, but not after a three-month follow-up, whereas activities designed to increase eudaimonia produced benefits after 3 months.

Exploratory Analysis

In addition to the primary analysis, exploratory analyses were conducted to test the contribution of specific individual values (i.e., power, achievement, benevolence, and universalism) to the results found here. Although previous research showed connections between agentic values and well-being (Garcia et al., 2015), these findings were not replicated in the present study. The exploratory analysis revealed that, with only one exception, the individual VEINs did not significantly predict the outcome variables. The one exception was that power was significantly related to altruism and well-being. However, the VEIN coding system was designed and validated specifically to measure moral centrality. That is, the degree to which people weave together themes of agency and communion in personal narratives. Thus, the full value profiles may differ from the profiles that might be generated by Schwartz's (1992) measure of universal values, which measures the relative importance of different values based on self-report.

A second set of exploratory analyses tested all possible agency-communion VEIN combinations as predictors of the main outcome variables. The purpose of these analyses was to discern overall patterns in the data in order to identify whether a specific agency-communion combination accounted for the overall results. Although it is important to keep in mind the high likelihood of Type 1 error, the results clearly showed that the achievement-benevolence combination was the most predictive of the outcome variables. In addition to mirroring the predictions of moral centrality, achievement-benevolence also was significantly associated with the presence of meaning in life and with less interpersonal problems. In these two cases, it is possible that in the analyses involving overall moral centrality, the association between meaning in life and interpersonal

functioning on one hand, and moral centrality on the other, was obscured by the presence of other agency-communion combinations. However, although these associations could be meaningful, they are small and need replication because of the increased likelihood of Type 1 error associated with multiple exploratory analyses. Taken together, the results of this analyses indicate that the achievement-benevolence combination accounts for most of the associations observed between moral centrality and the outcome variables and may be the most important combination of values to investigate in the context of mental health.

The coordination of achievement and benevolence may be associated with markers of mental health and well-being because it orients a person towards goals that directly fulfill two basic psychological needs: competence and relatedness. Competence and relatedness constitute two of three basic psychological needs that, according to Deci and Ryan (2000), are essential for psychological well-being and personal growth. The goals of achievement and benevolence directly orient a person towards the satisfaction of competence and relatedness, respectively. Competence and personal success are the primary goals of achievement. Benevolence, which entails caring for the welfare of close others, directly contributes to the development of meaningful relationships. In contrast, power represents a desire for social dominance and universalism represents a concern for the welfare of all people. Although power and universalism may have instrumental value, they do not directly orient a person towards the satisfaction of these basic, more proximal, psychological needs.

Following this, the coordination of achievement and benevolence may be associated with these markers of psychological health because it contributes to

eudaimonia, or the realization of human potential. The coordination of these values indicates the pursuit of goals that develop one's innate natural capacities and talents in a way that also contributes to the welfare of others. Because these values are normally at odds, their coordination represents a more optimal way of satisfying the needs for relatedness and competence. That is, it would enhance a person's ability to realize their full potential in terms of both their personal growth and their ability to develop meaningful relationships. This could explain why achievement-benevolence predicted eudaimonic well-being in the present study, and in turn, why it predicted the other markers of psychological health. Eudaimonic well-being entails self-actualization, and the presence of meaning in life, and is associated with a variety of markers of psychological health such as less depression and anxiety, and higher self-esteem (Waterman et al., 2010). If the achievement-benevolence value combination contributes to eudaimonic well-being, as was found in the present study, it is not surprising that it also predicts the markers of mental health assessed here.

The association between achievement-benevolence and fewer interpersonal problems suggests that this value combination may also play a role in social functioning. The exploratory analysis revealed a small negative correlation across the subscales of the Inventory of Interpersonal Problems, indicating a small but consistent association between a higher expression of achievement-benevolence values and lower interpersonal dysfunction. Prioritizing achievement and benevolence may create a balance between attending to the self and attending to others that is not present with power and universalism, and which may mitigate extreme manifestations of dominant and affiliative behaviour. Whereas power represents a desire for dominance over others and

universalism represents a care for the environment and the welfare of all people, the end goals of achievement and benevolence are personal success and the welfare of those in one's in-group, respectively. Thus, a person who values both achievement and benevolence may be better able to contribute to the welfare of others without being too self-sacrificing or overly accommodating. Similarly, they may be better able to pursue personal success without being excessively domineering or self-centered.

In summary, although overall moral centrality was associated with better general mental health, the combination of achievement and benevolence values seems to account for this association. This specific combination also showed a small, but consistent, association with the experience of living a more meaningful life and with reporting better interpersonal functioning. Although these latter results were issued from exploratory analyses and await replication, their consistency in the present data set suggest that they may represent a true phenomenon.

Limitations

All of the recruited participants in this study were university students, and the majority of them were young adults. This limits the study because it is unknown whether the results can be generalized or if moral centrality presents unique associations in this population. Moreover, since moral centrality is a developed trait, it is possible that the participants are still in the process of developing it given their young age. Low ethnic diversity also is a limitation: The majority of the participants identified as European, which makes it possible that the effects observed in this study are specific to this group and could be more or less pronounced in other ethnic/cultural groups.

Additionally, all data were collected online and through written format. Although similar data collection methods have previously been used to measure moral centrality, it is possible that this form of questioning may have limited the accurate assessment of moral centrality. For instance, although all participants answered the same questions, variation in response style may have affected the results if some participants put more thought and effort into their writing and/or were more proficient in their written English. In the future, coded in-person interviews may help control these issues.

Finally, because this study was correlational, causality and directionality of association cannot be determined. Although it was argued that the development of moral centrality may serve as a buffer against psychological distress because it represents a natural tendency to integrate normally opposed values, there are several alternative explanations for the associations found in this study. One possibility is that mental health and well-being make people more likely to develop moral centrality. For instance, the development of moral centrality may require a certain degree of emotional stability, and thus symptoms of psychological distress like depression and anxiety may interfere with the development of moral centrality. Alternatively, it is possible that a third variable is accounting for the patterns revealed in this study. For example, secure attachment between parent and child is associated with mental health later in life (Balbernie, 2013). Parents who promote healthy attachment styles with their children may also be modeling moral centrality by staying sensitive to their needs while simultaneously promoting their future mental health. Similarly, playing team sports has been shown to simultaneously promote self esteem and moral development in girls (Perry-Burney & Takyi, 2002). It is possible that participation in team sports may also promote moral centrality. Therefore,

additional research is necessary to better understand the direction of the associations found here.

Implications

Although this study is correlational, several provisional suggestions can be made. For therapists and alternative treatment providers who want to utilize interventions with a moral component, the current study suggests that communal values may be more protective when combined with agentic values. It is thus recommended that treatment providers pay attention to whether or not the moral component of an intervention might hinder a person's feeling of personal agency. Interventions with a moral component that do not also promote agency may be less effective. The present study shows that combining agentic and communal values may be associated with positive outcomes, and thus practitioners might benefit from attending to how different value combinations are satisfied through individual goals.

Additionally, the results of this study suggest that the specific combination of achievement and benevolence may be especially protective. Thus, it may be beneficial to keep track of the degree to which a person's goals contribute to the satisfaction of both of these values. For instance, a common practice in cognitive behavioural therapy is to have clients keep track of the degree to which different activities give them a sense of mastery and enjoyment (Beck, 2011). This practice could be extended to include ratings of the degree to which particular activities contribute to a sense of relatedness with others. Therapists might also discuss how mastery activities might be modified so that they can better contribute to the satisfaction of communal values.

Future Directions

Research on moral centrality holds considerable promise as a means of further illuminating how aspects of morality may relate to mental health. In future research, the nature of the connection between moral centrality and mental health could be clarified. Ideally, longitudinal studies could be employed to establish whether psychological distress prevents the development of moral centrality, or whether moral centrality protects against psychological distress. If the latter, researchers might further investigate the long-term effects of moral centrality, and whether it is preventative of psychological distress across time and into advancing age. Additionally, researchers might also explore the degree to which moral centrality can be consciously developed or cultivated through the use of interventions. Interventions that increase moral centrality could then be employed to explore the underlying causality of the relationships found in this study. For instance, whether a moral centrality intervention can improve mental health. Additionally, moral centrality may also be explored as a potential mechanism underlying the benefits of alternative therapies with a moral component. For instance, researchers might explore whether or not Ashtanga Yoga or Alcoholics Anonymous can affect changes in moral centrality, and if these changes contribute to the success of these interventions. Such research will contribute to a better understanding of how the moral components of these interventions contribute to their success, and may also be used to guide the development of novel clinical interventions that can be tested in controlled studies.

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APPENDICES

Appendix A

Participant Pool Advertisement

Title: Mental Health and Personal Narratives in University Students.

Researchers: Joseph Hoyda, Dr. Josée Jarry

Duration: 1.5 hours
Credits: 1.5 credits

Description:
The following study consists of an online survey. The total duration of the online survey is not expected to exceed 1.5 hours of your time, and it is worth 1.5 bonus points if you are registered in one or more eligible psychology courses.

Appendix B

Consent to Participate in Research

Title of Study: **"**Self-Narratives and Mental Health in University Students"

You are asked to participate in a research study conducted by Joseph Hoyda and supervised by Dr. Josée Jarry, from the Department of Psychology at the University of Windsor. Results of this study will be used to fulfil the requirements of a Master's thesis.

If you have any questions or concerns about the research, please feel free to contact the primary investigator, Joseph Hoyda, by email at hoyda@uwindsor.ca or the faculty supervisor, Dr. Josée Jarry by email at jjarry@uwindsor.ca or by telephone at 519-253-3000, ext. 2237.

PURPOSE OF THE STUDY

This study aims to evaluate a novel method of analysing values through self-narratives, and how they relate to mental health in undergraduate university students.

PROCEDURES

By selecting "I agree to participate" and typing your name in the box below, you are indicating that you consent to participate in this study. Once you have signed this consent form by typing your name, you will complete a survey that consists of several questionnaires in randomized order. Please complete the survey when you are alone in a quiet place where you can concentrate fully. The survey will take approximately 1.5 hours to complete, and you are required to complete the questionnaires in one sitting.

POTENTIAL RISKS AND DISCOMFORTS

During the course of your participation in this study, you will be asked to answer questions that are personal and may cause discomfort. Some people may experience mild discomfort when answering questions about how they feel about themselves. However, no significant risks or discomforts are anticipated. You may choose not to answer any question if you feel uncomfortable answering, and you may withdraw from the study at any time. If you experience any discomfort you may contact the primary investigator or the faculty supervisor directly to address your concerns. If you have any concerns you

would like to discuss with an independent party, please feel free to contact the Student Counselling Centre at 519-252-3000 ext. 4616.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

Participating in this study provides you the opportunity to contribute to psychological research and gain familiarity with online research procedures. Information provided by individuals participating in this study will help guide future research and will increase society's knowledge of self-narratives and mental health in undergraduate populations.

COMPENSATION FOR PARTICIPATION

Participants will receive 1 bonus point for 1 hour of participation towards the psychology participant pool, if registered in the pool and enrolled in one or more eligible courses.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential. Data will be de-identified for analysis after completion of the survey and no data will be associated with an individual. Consent forms will be stored separate from the data, keeping the data anonymous. The data will be acquired and stored online, using Qualtrix, which ensures complete confidentiality. Qualtrix does not record any information from the device accessing the website, except for the answers provided on the questionnaires. Once the questionnaires are completed, the data will be uploaded to an Excel spreadsheet and stored on the principal investigator's computer and the lab computer. Only the principal investigator and the faculty supervisor will have password required to access the data file. Upon completion of the study, participant data will be kept for approximately nine years, and then all data will be destroyed. This is in compliance with psychology discipline guidelines of keeping data for seven years post publication.

PARTICIPATION AND WITHDRAWAL

Your participation in this study is voluntary and you are free to withdraw at any time during the study. You are not required to answer any questions that you do not feel comfortable answering. Participation in this study will have no bearing on evaluation of your class performance. If you choose to withdraw at any point, you may do so. All you have to do is click "Withdraw" and your data will be discarded. Additionally, you may refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if appropriate circumstances arise. A valid response profile is required to receive compensation; an invalid response profile may be defined as a profile that is unlikely to occur by chance, such as all questions being given the same answer. If an invalid response profile arises, you will receive an e-mail inviting you to redo the study. If you decline or another invalid response profile is pro-

duced, you may not receive the bonus point. If you choose to withdraw, all incomplete data will be destroyed. If you would like to withdraw after completing the study, you may do so by contacting the primary investigator (Joseph Hoyda) before April 1st, 2020 (hoyda@uwindsor.ca).

You may request your data be withdrawn from the study at any point up to two weeks after completion of the study by emailing Joseph Hoyda (hoyda@uwindsor.ca). Your decision to participate in this study is completely independent of your academic standing, course grades, and relationship with the University. Your decision to withdraw from the study will not result in any negative consequences; for example, a negative credit will not be applied to your account in the pool. Withdrawal does not forfeit your bonus credit, however, as outlined above, depending on the portion of the study completed up to the time of withdrawal, fewer credits may be awarded. This is consistent with participant pool policies.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

A summary of results is expected to be available on the Research Ethics Board Website after August 2020.

Web address: www.uwindsor.ca/reb

SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications and in presentations.

RIGHTS OF RESEARCH PARTICIPANTS

If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I understand the information provided for the study **"**Self-Narratives and Mental Health in University Students" as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study.

Please select "I agree to participate" and enter your first name to indicate that you consent to participate. If you DO NOT consent to participate, please select "I do NOT agree to participate." It is recommended that you print a copy of this form for your records.

- o I agree to participate
- o I do NOT agree to participate

Please enter your name in the box below in place of a signature

Please enter today's date.

YYYY/MM/DD

Appendix C

Letter of Information for Debriefing and Consent to Data Retention

Is moral centrality associated with better mental health? Evidence for the protective effects of integrating agency and communion

Thank you for participating in this study. This study was designed to investigate the relationship between moral development and mental health. The idea that morality and mental health or well-being is a fundamental idea in many world religions, and morality has been used in a wide variety of mental health interventions. However, the nature of this relationship has not been thoroughly investigated by researchers in psychology. One reason for this is that moral development is very difficult to measure.

This study utilizes a novel measurement of moral development that makes it more suitable for measuring the relationship between morality and mental health. The main construct it measures is called moral centrality. Normally, people's desires are in opposition to what they believe is the right thing to do, which results in conflicting motivations that may be detrimental to well-being. Occasionally, some people's desires are aligned with their moral beliefs. This alignment is called moral centrality, and the main purpose of this study it investigate whether this alignment is beneficial to well-being and mental health.

For this study, you completed an online survey in which you answered a series of open-ended questions about your personal values and strivings, followed by several self-report questionnaires. The open-ended questions will be coded to measure moral centrality to determine if there is a relationship between moral centrality and mental health. The questionnaires will be used to form a comprehensive psychological assessment of mental health and well-being. Together, they measure depression, anxiety, interpersonal functioning, self-esteem, anxiety, the presence of meaning in life, and pro-social functioning.

I want you to know that I recognize that some of the questionnaires I asked you to complete were personal in nature. Some people might feel uncomfortable answering these questionnaires, others would not be uncomfortable at all. Both of these responses are perfectly normal. If you have any concerns, I encourage you to contact the primary investigator, Joseph Hoyda. You may also contact the Student Counselling Centre at 519-253-3000, ext. 4616, if you wish to discuss your concerns with someone outside the study. If you have any concerns or questions at all about the study, or are interested in receiving more information, please feel free to contact the primary investigator, Joseph Hoyda, Department of Psychology, at hoyda@uwindsor.ca.

As in most psychological research, we are interested in how the average person reacts in this situation. We need to test many people and combine their results in order to get a good indication of how the average person reacts under the different conditions. In order for us to draw any conclusions, we have to combine the data we got from you with data we get from other people so that we have enough data to draw conclusions. What

this means is that there will be many people participating in this study. It is going to be necessary for us to ask you not to say anything about the study to anyone else. If you talked to someone else about the study and told them all the things I just told you and then they were in the study, their reactions wouldn't be spontaneous and natural, and their results couldn't be used and combined with your data and those from other people. If that happened, we wouldn't have enough data to make conclusions about the average person, so the whole study really would be for nothing. I hope you can see why it is extremely important that I ask you not to say anything about the study. You might think that it won't make a difference if you talk to your roommate about it because they'll never be in the study, but your roommate might say something to someone else who might be in the study. Thus, I would like to ask you not to say anything about the study, other than you completed some questionnaires until the end of the study, when results are posted on the Research Ethics Board website.

If you consent below, the data you have provided in both studies, including your questionnaire responses and your interview data, will be used. You are free to decide not to consent without having to give a reason and without penalty. If you do not consent, your data will be destroyed. You are encouraged to save or print a copy of this form.

I have read and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to allow my data from both studies to be used in this research, knowing that I can withdraw from further participation in the research at any time within the next two weeks without consequence.

I have read and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to allow my data to be used in this research, knowing that I can withdraw from further participation in the research at any time within the next two weeks without consequence.

- o I consent to the use of my data
- o I do NOT consent and wish that my data be destroyed.

Please enter your name in the box below in place of a signature

Please enter today's date.
YYYY/MM/DD

If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca. Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Appendix D

Demographics Questionnaire

Age:_____
Gender Identity: _____
Ethnic Background: _____

Relationship Status

- Single
- In a relationship or cohabitating
- Married or common law
- Divorced or separated
- Widowed

School Enrolment

- Part-Time
- Full-Time

Academic Major(s): _____
Academic Minor(s): _____

Years in University:
(Select current year)

- First year
- Second year
- Third year
- Fourth year
- More than 4 years

Do you have any siblings? If so, how many?

- 0
- 1
- 2
- 3
- 4
- **5**+

Appendix E

Inventory of Interpersonal Problems-32

People have reported having the following problems in relating to other people. Please read the list below, and for each item, consider whether it has been a problem for you with respect to **any** significant person in your life. Then circle the number that describes how distressing that problem has been.

1	2	3	4	5
Not at all	A little bit	Moderately	Quite a bit	Extremely

The following are things you find hard to do with other people.

It is hard for me to:

1. Say "no" to other people. 0 1 2 3 4
2. Join in on groups. 0 1 2 3 4
3. Keep things private from other people. 0 1 2 3 4
4. Tell a person to stop bothering me. 0 1 2 3 4
5. Introduce myself to new people. 0 1 2 3 4
6. Confront people with problems that come up. 0 1 2 3 4
7. Be assertive with another person. 0 1 2 3 4
8. Let other people know when I am angry. 0 1 2 3 4
9. Socialize with other people. 0 1 2 3 4
10. Show affection to people. 0 1 2 3 4
11. Get along with people. 0 1 2 3 4
12. Be firm when I need to be. 0 1 2 3 4
13. Experience a feeling of love for another person. 0 1 2 3 4
14. Be supportive of another person's goals in life. 0 1 2 3 4
15. Feel close to other people. 0 1 2 3 4
16. Really care about other people's problems. 0 1 2 3 4
17. Put somebody else's needs before my own. 0 1 2 3 4
18. Feel good about another person's happiness. 0 1 2 3 4
19. Ask other people to get together socially with me. 0 1 2 3 4
20. Be assertive without worrying abouEt hurting the other person's feelings. 0 1 2 3 4

The following are things that you do too much.

21. I open up to people too much. 0 1 2 3 4
22. I am too aggressive toward other people. 0 1 2 3 4
23. I try to please other people too much. 0 1 2 3 4
24. I want to be noticed too much. 0 1 2 3 4
25. I try to control other people too much. 0 1 2 3 4
26. I put other people's needs before my own too much. 0 1 2 3 4
27. I am overly generous to other people. 0 1 2 3 4
28. I manipulate other people too much to get what I want. 0 1 2 3 4
29. I tell personal things to other people too much. 0 1 2 3 4
30. I argue with other people too much. 0 1 2 3 4
31. I let other people take advantage of me too much. 0 1 2 3 4
32. I am affected by another person's misery too much. 0 1 2 3 4

Appendix F

Positive and Negative Affect Schedule

This scale consists of a number of words that describe different feeling and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	A little bit	Moderately	Quite a bit	Extremely

_____interested
_____distressed
_____excited
_____upset
_____strong
_____guilty
_____scared
_____hostile
_____enthusiastic
_____proud
_____irritable
_____alert
_____ashamed
_____inspired
_____nervous
_____determined
_____attentive
_____jittery
_____active
_____afraid

Appendix G

Rosenberg Self-Esteem Scale

Below is a list of statements about your general feelings about yourself. Please select the appropriate answer per item, depending on whether you strongly agree, agree, disagree, or strongly disagree with it.

0	1	2	3
Strongly Disagree	Disagree	Agree	Strongly Agree

1. I feel that I am a person of worth, at least on an equal plane with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure.
4. I am able to do things as well as most people.
5. I feel that I do not have much to be proud of.
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself.
9. I certainly feel useless at times.
10. At times I think that I am no good at all.

Appendix H

State-Trait Anxiety Inventory

STATE: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel ***right now*****,** that is, at this ***moment***. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	Not at all	**Somewhat**	**Moderately so**	**Very much so**
1. I feel calm	1	2	3	4
2. I feel secure	1	2	3	4
3. I am tense	1	2	3	4
4. I feel strained	1	2	3	4
5. I feel at ease	1	2	3	4
6. I feel upset	1	2	3	4
7. I am presently worrying over possible misfortunes	1	2	3	4
8. I feel satisfied	1	2	3	4
9. I feel frightened	1	2	3	4
10. I feel comfortable	1	2	3	4
11. I feel self-confident	1	2	3	4
12. I feel nervous	1	2	3	4
13. I am jittery	1	2	3	4
14. I feel indecisive	1	2	3	4
15. I am relaxed	1	2	3	4
16. I feel content	1	2	3	4
17. I am worried	1	2	3	4
18. I feel confused	1	2	3	4
19. I feel steady	1	2	3	4
20. I feel pleasant	1	2	3	4

TRAIT: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel ***generally feel***. There are no right or wrong answers. Don't spend too much time on any statement but give the answer which seems to describe how you ***generally feel.***

	Almost Never	**Sometimes**	**Often**	**Almost Always**
21. I feel pleasant	1	2	3	4
22. I feel nervous and restless	1	2	3	4
23. I am satisfied with myself	1	2	3	4
24. I wish I could be as happy as others seem to be	1	2	3	4
25. I feel like a failure	1	2	3	4
26. I feel rested	1	2	3	4
27. I am 'calm, cool, and collected.'	1	2	3	4
28. I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
29. I worry too much over something that really doesn't matter	1	2	3	4
30. I am happy	1	2	3	4
31. I have disturbing thoughts	1	2	3	4
32. I lack self-confidence	1	2	3	4
33. I feel secure	1	2	3	4
34. I make decisions easily	1	2	3	4
35. I feel inadequate	1	2	3	4
36. I am content	1	2	3	4
37. Some unimportant thought runs through my mind and bothers me	1	2	3	4
38. I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
39. I am a steady person	1	2	3	4
40. I get in a state of tension or turmoil as I think over my recent concerns and interests	1	2	3	4

Appendix I

Meaning in Life Questionnaire

Please take a moment to think about what makes your life feel important to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

Absolutely Untrue 1	Mostly Untrue 2	Somewhat Untrue 3	Can't Say True or False 4	Somewhat True 5	Mostly True 6	Absolutely True 7

1. I understand my life's meaning.

2. I am looking for something that makes my life feel meaningful.

3. I am always looking to find my life's purpose.

4. My life has a clear sense of purpose.

5. I have a good sense of what makes my life meaningful.

6. I have discovered a satisfying life purpose.

7. I am always searching for something that makes my life feel significant.

8. I am seeking a purpose or mission for my life.

9. My life has no clear purpose.

10. I am searching for meaning in my life.

Appendix J

Beck Depression Inventory II

This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today.** Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness
0 I do not feel sad.
1 I feel sad much of the time.
2 I am sad all the time.
3 I am so sad or unhappy that I can't stand it.

2. Pessimism
0 I am not discouraged about my future.
1 I feel more discouraged about my future than I used to be.
2 I do not expect things to work out for me.
3 I feel my future is hopeless and will only get worse.

3. Past Failure
0 I do not feel like a failure.
1 I have failed more than I should have.
2 As I look back, I see a lot of failures.
3 I feel I am a total failure as a person.

4. Loss of Pleasure
0 I get as much pleasure as I ever did from the things I enjoy.
1 I don't enjoy things as much as I used to.
2 I get very little pleasure from the things I used to enjoy.
3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
0 I don't feel particularly guilty.
1 I feel guilty over many things I have done or should have done.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6. Punishment Feelings
0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

7. Self-Dislike
0 I feel the same about myself as ever.
1 I have lost confidence in myself.
2 I am disappointed in myself.
3 I dislike myself.

8. Self-Criticalness
0 I don't criticize or blame myself more than usual.
1 I am more critical of myself than I used to be.
2 I criticize myself for all my faults.
3 I blame myself for everything bad that happens.

9. Suicidal Thought or Wishes
0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10. Crying
0 I don't cry anymore than I used to.
1 I cry more than I used to.
2 I cry over every little thing.
3 I feel like crying, but I can't.

11. Agitation
0 I am no more restless or wound up than usual.
1 I feel more restless or wound up than usual.
2 I am so restless or agitated that it's hard to stay still.
3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest
0 I have not lost interest in other people or activities.
1 I am less interested in other people or things than before.
2 I have lost most of my interest in other people or things.
3 It's hard to get interested in anything.

13. Indecisiveness
0 I make decisions about as well as ever.
1 I find it more difficult to make decisions than usual.
2 I have much greater difficulty in making decisions than I used to.
3 I have trouble making any decisions.

14. Worthlessness
0 I do not feel I am worthless.
1 I don't consider myself as worthwhile and useful as I used to.
2 I feel more worthless as compares to other people.
3 I feel utterly worthless.

15. Loss of Energy
0 I have as much energy as ever.
1 I have less energy than I used to have.
2 I don't have enough energy to do very much.
3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern
0 I have not experienced any change in my sleeping pattern.
1a I sleep somewhat more than usual.
1b I sleep somewhat less than usual.
2a I sleep a lot more than usual.
2b I sleep a lot less than usual.
3a I sleep most of the day.
3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability
0 I am no more irritable than usual.
1 I am more irritable than usual.
2 I am much more irritable than usual.
3 I am irritable all the time.

18. Changes in Appetite
0 I have not experienced any change in my appetite. .
1a My appetite is somewhat less than usual.
1b My appetite is somewhat greater than usual. .
2a My appetite is much less than before.
2b My appetite is much greater than usual. .
3a I have no appetite at all.
3b I crave food all the time.

19. Concentration Difficulty
0 I can concentrate as well as ever.
1 I can't concentrate as well as usual.
2 It's hard to keep my mind on anything for very long.
3 I find I can't concentrate on anything.

20. Tiredness or Fatigue
0 I am no more tired or fatigued than usual.
1 I get more tired or fatigued more easily than usual.
2 I am too tired or fatigued to do a lot of the things I used to do.
3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex
0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

Appendix K

The Self-Report Altruism Scale

	Never	Once	More than once	Often	Very Often
1. I have helped push a stranger's car out of the snow.					
2. I have given directions to a stranger.					
3. I have made change for a stranger.					
4. I have given money to charity.					
5. I have given money to a stranger who needed it (or asked me for it).					
6. I have donated goods or clothes to a charity.					
7. I have done volunteer work for a charity.					
8. I have donated blood.					
9. I have helped carry a stranger's belongings (books, parcels, etc.)					
10. I have delayed an elevator and held the door open for a stranger.					
11. I have allowed someone to go ahead of me in a lineup (at Xerox machine, in the supermarket)					
12. I have given a stranger a lift in my car.					
13. I have pointed out a clerk's error (in a bank, at the supermarket) in undercharging me for an item.					
14. I have let a neighbour whom I didn't know too well borrow and item of some value to me (e.g., a dish, tools, etc.).					
15. I have bought 'charity' Christmas cards deliberately because I knew it was a good cause.					
16. I have helped a classmate who I did not know that well with a homework assignment when my knowledge was greater than his or hers.					
17. I have before being asked, voluntarily looked after a neighbour's pets or children without being paid for it.					
18. I have offered to help a handicapped or elderly stranger across a street.					
19. I have offered my seat on a bus or train to a stranger who was standing.					
20. I have helped an aquaintance to move households.					

Appendix L

VEIN Coding and Scoring Examples

The following represents 3 examples of a thematic 'chunk' and how they would be coded into a data matrix. Agentic themes (power or achievement) are in **bold**, communal themes (benevolence or universalism) are in *italic,* and values that are neither agentic or communal are underlined.

Chunk 1: I am a really **hard worker** and I hope to one day become an **influential** politician. This is important to me because I hope to fight for *social justice*.

Achievement: **hard worker**
Power: **Influential**
Universalism: *Social justice*

Chunk 2: I am a **hard worker** and hope to become **powerful** lawyer so that I will always have **financial security**.

Achievement: **hard worker**
Power: **powerful, financial security**

Chunk 3: The most important thing in life is to be <u>spontaneous</u> have a <u>good time</u>.

Hedonism: <u>good time</u>
Stimulation: <u>spontaneous</u>

The following table is an example of how the tallied VEIN scores will look. Summary scores for the individual VEINS represent the total percentage of chunks that include that particular VEIN. The summary of the overlap score represents the percentage of chunks containing either an agentic value or communal value. This reflects the number of chunks that contain both communal and agentic VEINs, divided by the amount of chunks that contain either agentic or communal themes present. The result represents the probability that communal VEIN will be interwoven with an agentic VEIN.

		Data Matrix from VEIN coding										
		Main effect										
Question	Stem	PO	AC	HE	ST	SD	UN	BE	TR	CO	SE	Overlap
Describe yourself	Politician	1	1	0	0	0	1	0	0	0	0	1
	Lawyer	1	1	0	0	0	0	0	0	0	0	0
	Good time	0	0	1	1	0	0	0	0	0	0	--
Summary Score		66%	66%	33%	33%	0%	33%	0%	0%	0%	0%	50%

Appendix M

Modified Personal Strivings List

One way to describe someone's personality is to consider the purposes or goals that the person seems to be seeking in their everyday behaviour. We might call these objectives "strivings." Here are some examples of strivings:

- Trying to be physically attractive to others
- Trying to help others in need of help
- Trying to seek new and exciting experiences
- Trying to reach your full potential
- Trying to be healthy-minded

These strivings can be broad (e.g., trying to make others happy) or specific (e.g., "trying to make my partner happy"). They can also include things that you try to avoid (e.g., "trying to avoid calling attention to yourself").

Please write down at least 15 strivings in the space below. Be as honest an objective as possible. Do not give simply socially desirable strivings, or strivings which you think you "ought" to have.

You might find it useful to think about your goals in different domains in life: work, school, home, family, social relationships, leisure, hobbies. Think about all of your desires, goals, wants, and hopes in these different areas.

Please take your time with this task, and take a few minutes thinking about your goals before you begin. Each response will be followed by a prompt which will ask you why this striving is important to you.

I typically try to_____

Why is this important to you? _____

Appendix N

Personal Values and Goals

This questionnaire consists of 8 open-ended questions about your goals and values in life. Before each question, take this opportunity to reflect on who you are and what makes you different from other people.

Please answer each question in as much detail as possible. After each question, you will be asked to write a sentence or two explaining why this is important to you.

1. Write about two activities that are most important to you. For each activity, provide a description of why these activities are important to you.

2. Write about two things that you would like to accomplish in life. For each goal, provide a description of why you would like to accomplish this.

3. What would be your ideal job/career? Why? What makes that career attractive to you?

4. Describe something you have done in your life that you are particularly proud of. Why?

5. What are some habits that you try to maintain? Why?

6. Write about three characteristics that defines you or is important to who you are. Why is that important to you?

7. What do you like most about yourself? Why?

8. What character traits do you most admire? Why?

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