

*Chapter 29*

**DO CHRONIC MORAL EMOTIONS  
MEDIATE BETWEEN VALUE CONGRUENCE  
AND PSYCHOLOGICAL WELLBEING  
IN UNIVERSITY STUDENTS?**

*Andrew N. Hall<sup>1</sup> and Kathryn M. Gow<sup>2</sup> and Michael L. Penn<sup>3</sup>*

<sup>1</sup>Queensland University of Technology, Australia

<sup>2</sup>Consulting Psychologist, Regional Australia

<sup>3</sup>Franklin and Marshall College, USA, Lancaster, Pennsylvania

**ABSTRACT**

In an effort to better understand the role that moral emotions play in the psychological health of university students, we asked university students to focus on the level of congruence or incongruence between their personal moral commitments and their behaviours (value congruence); concurrently, we measured selected aspects of students' psychological health: namely, general psychological illness and three nominated markers of subjective well-being (life satisfaction, optimism, and self-esteem). Chronic moral emotions were conjectured to mediate between value congruence and the selected markers of psychological health. This was the case for the subjective well-being variables, but not for general psychological illness. Higher value congruence was related to lower chronic moral emotions as well as higher life satisfaction, optimism, and self-esteem; however, value congruence did not correlate with general psychological illness. Further, lower chronic moral emotions were associated with an increase in each subjective well-being index and lower general psychological illness. Moreover, lower chronic moral emotions accounted for the positive relationship between value congruence and each component of subjective well-being. We suggest that further investigations involving larger samples in a diversity of university settings may provide insights that would empower clinicians to assist university students who are struggling with the deleterious impacts of value incongruent behaviour.

**Keywords:** Value Congruence, Chronic Moral Emotions, Psychological Illness, Life Satisfaction, Optimism, Self-Esteem

## INTRODUCTION

Shame and guilt are moral emotions that arise in response to self-assessments and self-reflective judgments that what one has done or not done, or the kind of person one has become, is faulty (Kroll, Egan, Erickson, Carey, & Johnson, 2004). These emotions are of great interest to many theorists and researchers in psychiatry and abnormal psychology, since such emotions appear to have high importance for psychological health - potentially playing central roles in the pathogenesis or exacerbation of a range of psychopathological states as well as deterioration of subjective well-being (Penn, Jayawickreme, Atanasov, & Schien, under review). Our work seeks to explore the role that recurrent experience of guilt and shame (chronic moral emotions) may play in mediating the impacts of moral behaviour on psychological health. We hypothesised that the level of congruence or incongruence between a person's own moral commitments and behaviours (value congruence) may affect his or her psychological health indirectly via influencing whether or not he or she experiences chronic moral emotions (Penn et al., under review). In this chapter, we adumbrate the theoretical rationale for such a prediction (see also Hall, Gow, Penn, & Jayawickreme, 2011; Penn et al., under review) and report on our findings from a correlational study.

### Chronic Moral Emotions and Psychological Health

Chronic moral emotions may impact negatively on psychological health. They may lead to the onset or exacerbation of numerous psychological disorders, such as major depression, substance abuse, and somatisation, as well as to reduced subjective well-being, such as life dissatisfaction, pessimism, and poor self-esteem (Penn et al., under review). When moral emotions persist over extended periods of time, the belief that the self is faulty may become firmly entrenched. When this occurs, other undesirable ways of experiencing the self, which may be directly implicated in various psychological disorders, may arise. For example, a self that is seen as faulty also may be hated and induce feelings of helplessness and hopelessness over the perceived difficult or impossible task of repairing it (Penn et al., under review; Tangney, 1996). This could, in turn, cause or contribute to major depression and, in extreme cases, suicidal actions in an attempt to escape noxious or painful self-awareness (Baumeister, 1991).

### Value Congruence and Chronic Moral Emotions

Value congruence may influence whether or not a person experiences chronic moral emotions by affecting his or her moral self-assessments. Persons who tend to act incongruently with their values may experience chronic moral emotions because they are likely to assess themselves and their behaviour as evidence of moral failure. In this connection, Bybee and Quiles (1998, p. 281) noted:

Acts that are repeated, that are habitual, or that form a pattern may give rise to both chronic guilt and shame as the individual feels guilty over each incident and ashamed for the characterological flaw that permitted the behavior to be continued. Singular incidents

may also give rise to both chronic guilt and shame. A solitary event may mar and stigmatize, leading to ongoing guilt over the event (e.g., having an accident while driving under the influence) and shame over the label (e.g., being a drunk driver).

Conversely, those who tend to act congruently with their values may be spared continual feelings of shame and guilt because they assess themselves and their behaviour positively.

### The Mediating Role of Chronic Moral Emotions

Figure 1 shows a model of psychological health based on value congruence that has been proposed by Penn et al. (under review). The model is as follows. Value congruence affects a person's psychological health (levels of psychological illness and subjective well-being) indirectly via influencing whether or not he or she experiences chronic moral emotions. Specifically, value-incongruent behaviour leads to chronic moral emotions, which in turn may result in psychological health problems (i.e., psychological illness and low subjective well-being). Conversely, value-congruent action helps to spare the person from such undesirable consequences.

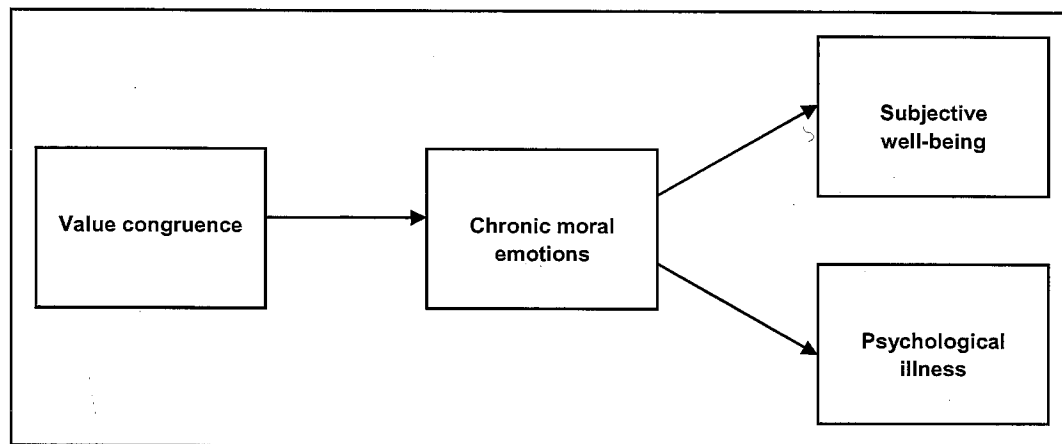


Figure 1. Conceptual Model of the Relations between Value Congruence, Chronic Moral Emotions, and Psychological Health (Psychological Illness and Subjective Well-Being). Based on Penn, et al. (under review).

### Research Aims and Hypotheses

The aim of the present study was to extend upon Penn et al.'s (under review) initial investigation of the model by examining the mediating role assigned for chronic moral emotions. In this correlational design, five relationships in accord with the model were posited and are as follows. Increased value congruence, as measured by self-report of the extent to which behaviour over the past six months had been consistent or inconsistent with self-endorsed moral values would correlate negatively with (1) chronic moral emotions and (2) general psychological illness, and positively with selected indices of subjective well-

being, including (3) life satisfaction, (4) optimism, and (5) self-esteem. Importantly, it was also predicted that chronic moral emotions would mediate the relationships of value congruence to general psychological illness and the subjective well-being indices.

## METHOD

### Participants

One hundred and one undergraduate and postgraduate university students aged 18 to 61 years ( $M$  age = 25.0 years,  $SD$  = 9.5) volunteered to participate in the study. Students under 18 were ineligible to participate. Of the 100 participants who provided data, 84 were undergraduates enrolled in a course in introductory psychology; the remaining 16 postgraduate participants were colleagues of the lead author enrolled in coursework pursuing masters or doctorate degrees in clinical psychology. As an incentive for participation, undergraduates received a half-hour credit toward the research participation component of their course. Postgraduates received no incentive for participation.

### Measures

*Personal Morality and Degree of Strength of Character Scale (PM-DSC).* The PM-DSC is a measure of self-endorsed personal morality commitments and value congruence that the lead author devised for use in this study. The PM-DSC is an adaptation of the methodology employed by Penn et al. (under review) and consists of two parts. Part I is an adaptation by the lead author of the Goal and Mode Values Inventories (GMVI; Braithwaite & Law, 1985); it measures personal morality commitments. In this study, Part I was administered solely for the purpose of having participants reflect on their personal moral commitments in order to assist their assessment of their value congruence in Part II.

Part I has two components. Component A is the original GMVI, which contains three inventories. The Personal Goal Values Inventory contains 23 personal end states of existence that may serve as life-guiding principles for the respondent (e.g., Item 5: "True Friendship [having genuine and close friends]"). The Mode Values Inventory includes 42 human traits (e.g., Item 8: "Loving [showing genuine affection]"; Item 14: "Bright [being quick thinking]"). The Social Goal Values inventory contains 14 socially-relevant end states of existence that pertain to the development and protection of the community and which also serve to guide personal behaviour (e.g., Item 5: "A World at Peace [being free from war and conflict]"). Respondents indicate their acceptance or rejection of each value on a 7-point Likert scale ranging from 1 ("I reject this as a guiding principle in my life") through 3 ("I neither reject nor accept this as a guiding principle in my life") to 7 ("I accept this as of the greatest importance as a guiding principle in my life"). Braithwaite and Law (1985) reported median test-retest reliabilities for the Personal Goal Values, Mode Values, and Social Goal Values inventories of .62, .61, and .62, respectively.

Component B consists of an additional item set designed by the lead author that requires respondents to indicate which of their accepted human values are morally relevant. To accomplish this, each item from Component B is paired to an item from Component A. Each Component B item requires the respondent to answer either yes or no to the following statement: "For me personally, to reject this value would be immoral." Each Component B item is to be answered only if the corresponding human value from Component A is accepted (i.e., the corresponding Component A item is scored 4–7). If the respondent indicates that it would be immoral to reject the human value that is under consideration, by answering yes, then that human value is judged to be moral for the respondent. Conversely, if the respondent indicates that it would not be immoral to reject the human value, by answering no, then that human value is deemed morally-irrelevant for the respondent. Figure 2 depicts an example item that shows the two components of Part I of the PM–DSC.

The inclusion of Component B, in addition to the original GMVI, is intended to enhance the instrument's construct validity as a measure of moral values (as opposed to human values in general). However, Component B has not yet been psychometrically validated.

Component 1 (Human values)							Component 2 (Moral values)
1 I reject this	2 I am inclined to reject this	3 I neither accept nor reject this	4 I am inclined to accept this as important	5 I accept this as important	6 I accept this as very important	7 I accept this as of the greatest importance	If 4-7 circled: For me personally, to reject this value would be immoral
1. Physical Development (being physically fit)							
1	2	3	4	5	6	7	Y N

Figure 2. Example item from PM–DSC Part I showing Components A and B.

Part II of the PM–DSC is an adapted version of Penn et al.'s (under review) single-item measure of value congruence. The rephrased item refers specifically to moral values, rather than to human values in general. The item is as follows:

The values from Part I that you accept (i.e., circled 4–7) and believe that to reject would be immoral (i.e., circled Y) can be termed your current *moral values*. Now, reflecting specifically on your current *moral values* (as opposed to your other sorts of values), indicate the extent to which your behaviour during the past six months has been consistent/inconsistent with these values. Do this by ticking the appropriate box below (tick only one box). In other words, we are interested in your personal belief about the degree to which your present way of life is in harmony with your current moral values.

The asymmetrical 5-point rating scale ranges from 1 (My behaviour has been very inconsistent with my moral values) through 3 (My behaviour has been somewhat consistent

with my moral values) to 5 (My behaviour has been very consistent with my moral values). Part II is yet to be psychometrically validated.

*State Shame and Guilt Scale (SSGS)*. The Shame and Guilt subscales of the SSGS (Marschall, Sanftner, & Tangney, 1994) were used to measure chronic moral emotions. Although the SSGS was originally designed to measure in-the-moment (i.e., state) feelings of shame (e.g., "I feel like I am a bad person.") and guilt (e.g., "I feel bad about something I have done."), the scale was adapted to assess the chronic form of these emotions by using an extended time frame (i.e., the past week). To derive an index of chronic moral emotions, sum-scores of the two subscales were aggregated. In support of the validity of this aggregated score, the two subscales proved to be correlated highly ( $r = .7$ ,  $N = 100$ ). Each subscale contains 5 items with a scale ranging from 1 (Not felt this way at all) to 5 (Felt this way very strongly). Total scores range between 10 and 50, with higher scores indicating greater chronic moral emotions. Murray, Ciarrocchi, and Murray-Swank (2007) reported alpha reliabilities for the shame and guilt subscales of .84 and .83, respectively.

*Brief Symptom Inventory (BSI)*. The BSI (Derogatis, 1993) is a widely used, carefully validated, brief version of the Symptom Checklist-90-Revised (Derogatis, 1994). The 53 items provide a scale of subjective distress ranging from 0 (Not at all) to 4 (Extremely). Participants are instructed to rate each item based on how much that problem has distressed or bothered them during the past week. Higher scores denote greater pathology or greater mental or physical distress. The measure produces nine primary symptom indices (e.g., Depression, Anxiety) as well as three global indices of distress, one of which is the Global Severity Index (GSI), which is a measure of general psychological illness (mean of all items). The BSI data reported in this study are limited to GSI scores.

*Subjective well-being measures*. A separate measure was used for each selected component of subjective well-being: life satisfaction, optimism, and self-esteem. In this study, the three subjective well-being measures were presented together in a single questionnaire. Items of the three measures were intermixed. For all three measures, the same item response format was adopted; participants were instructed to respond based on their experience during the past week on a 5-point Likert scale ranging from 1 (Strongly Disagree) through 3 (Neutral) to 5 (Strongly Agree). Negatively worded items were reverse scored. For each measure, a sum-score was obtained, with higher scores indicating greater life satisfaction, optimism, and self-esteem.

The Satisfaction with Life Scale (SWLS) was designed by Diener, Emmons, Larsen, and Griffin (1985). The SWLS is based on the assumption that "one must ask subjects for an overall judgement of their life in order to measure the concept of life satisfaction" (pp. 71–72). Diener and his colleagues employed factor analysis to derive 5 items from an original pool of 48. Example SWLS items include, "In most ways my life is close to my ideal." and "If I could live my life over, I would change almost nothing." Diener et al. reported a two-month test-retest correlation coefficient of .82 and an alpha coefficient of .87 for a sample of 176 undergraduates. Furthermore, they found that the SWLS correlates positively with other indices of subjective well-being and negatively with markers of psychological illness.

The Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994) contains 6 items that assess optimism. Of these items, three are worded in the positive (e.g., "I'm always optimistic about my future.") and three in the negative (e.g., "If something can go wrong for me, it will."). Scheier et al. (1994) found that these items have a Cronbach's alpha of .78 and a test-retest correlation coefficient at intervals of 4 months, 12 months, 24 months,

and 28  
In the p  
among i  
The  
self-este  
RSE cor  
good qu

## Proced

Ethi  
participa  
fliers po  
returnin  
School c  
addition  
copies c  
(0.7%) v  
excluded

## Prelim

Miss  
part of t  
moral va  
Illness d  
participa  
Furtherm  
Satisfact  
missing  
General  
primary  
data poin

Assu  
and Gen  
Self-Este  
There we  
and was  
Emotions  
For the

and 28 months of .68, .60, .56, and .79, respectively. The LOT-R also contains 4 filler items. In the present study, the filler items were not used, as the six LOT-R items were interspersed among items of the other two subjective well-being measures.

The Rosenberg Self-esteem Scale (RSE; Rosenberg, 1965) is a widely used measure of self-esteem, possessing good reliability and validity (Crandall, 1973; Rosenberg, 1965). The RSE contains 10 items, including five worded positively (e.g., "I feel that I have a number of good qualities.") and five negatively (e.g., "I wish I could have more respect for myself.").

## Procedure

Ethical clearance was obtained from the University Research Ethics Unit. Undergraduate participants were recruited by advertising, while postgraduate participants were recruited by fliers posted in postgraduate offices across campus. The survey included instructions for returning the survey via mail, in a prepaid envelope, or in person, to a deposit box at the School of Psychology building. Surveys that were distributed to the undergraduates included additional instructions for securing research participation credit. One hundred and forty six copies of the survey were distributed. Of these, 101 (69.2%) were returned complete, one (0.7%) was returned blank, and 44 (30%) were not returned. One of the returned surveys was excluded as explained in the next section.

## RESULTS

### Preliminary Analyses

*Missing values.* No action was taken in response to missing data on the personal morality part of the PM-DSC, as this was administered solely to have participants reflect upon their moral values. There were no missing data for Value Congruence. All General Psychological Illness data for one participant were missing; these missing data were not replaced. This participant's data were retained for analyses not involving General Psychological Illness. Furthermore, 0.1% of data for Chronic Moral Emotions, General Psychological Illness, Life Satisfaction, Optimism, and Self-Esteem were missing in apparent random fashion. These missing data were replaced using the expectation-maximization method. Missing data for General Psychological Illness were replaced with reference to the particular GSI primary symptom index (e.g., Depression, Obsessive-Compulsive) pertaining to the missing data point.

*Assumptions of normality.* One participant had particularly high Chronic Moral Emotions and General Psychological Illness scores, and markedly low Life Satisfaction, Optimism, and Self-Esteem scores. This participant's scores were excluded from the analyses as an 'outlier.' There were no other unusual scores. Value Congruence was significantly negatively skewed, and was normalised after reflection using a square-root transformation. Chronic Moral Emotions was significantly positively skewed and was normalised with a log transformation. For the psychological health distributions, General Psychological Illness was positively

skewed, and the three subjective well-being distributions were normally distributed. The four psychological health distributions reported here are consistent with expectations for a non-clinical sample. General Psychological Illness was normalised with a square-root transformation. All assumptions were met for the analyses.

*Descriptive statistics and reliability.* Descriptive statistics for each variable and internal consistency data for each multi-item variable (i.e., all variables except Value Congruence) are shown in Table 1. The undergraduate and postgraduate participants' data are shown together, as group means for each variable were the same (analyses not shown). On average, the participants regarded their way of life as being generally consistent with their personal morality. Mean levels of Chronic Moral Emotions was low. Consistent with expectations for a non-clinical sample, average General Psychological Illness was low, and means of Life Satisfaction, Optimism, and Self-esteem were moderate to high. All multi-item variables showed acceptable internal consistency, with Cronbach's alphas ranging from 0.79 to 0.97.

### Bivariate Analyses

A series of simple regression analyses were conducted to investigate the various hypothesised bivariate relations between Value Congruence, Chronic Moral Emotions, and the psychological health indices: General Psychological Illness, Life Satisfaction, Optimism, and Self-Esteem. Note that, here and elsewhere, Value Congruence is reported in an unreflected form, in order to show the true direction of its relations to other variables. The Alpha level was set at .05.

First, Pearson correlation coefficients for the variable interrelationships are shown in Table 2, and then the regression analyses are discussed. Increased Value Congruence correlated with decreased Chronic Moral Emotions,  $\beta = -.22$ ,  $F(1, 98) = 5.10$ ,  $p = .03$ , 95% CI  $[-.08, -.36]$ . Effect size was small-to-moderate.

**Table 1: Descriptive Statistics and Internal Consistency (Cronbach's  $\alpha$ ) for Value Congruence, Chronic Moral Emotions, General Psychological Illness, and Subjective Well-being Indicators (Life Satisfaction, Optimism, and Self-esteem)**

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	95% CI		$\alpha$
Value congruence	100	2.95	0.74	2.80	– 3.10	– <sup>a</sup>
Chronic moral emotions	100	17.17	6.70	15.86	– 18.48	0.89
General psychological illness	99	0.72	0.60	0.60	– 0.84	0.97
Life satisfaction	100	17.00	3.64	16.29	– 17.71	0.80
Optimism	100	21.49	3.95	20.72	– 22.26	0.79
Self-esteem	100	36.44	6.24	35.22	– 37.66	0.87

Note. All variables untransformed. <sup>a</sup>1-item variable.

Increased Value Congruence was associated with increases in each subjective well-being index. Value Congruence explained 36% of the variance in Life Satisfaction,  $F(1, 98) =$



14.56,  $p < .001$ , 95% CI [22, 51]. Effect size was moderate. Value Congruence explained 21% of both Optimism,  $F(1, 98) = 4.46$ ,  $p = .04$ , and Self-Esteem,  $F(1, 98) = 4.71$ ,  $p = .03$ , 95% CI [7, 35]. Effect sizes were small-to-moderate. Inconsistent with the model, Value Congruence was unrelated to General Psychological Illness,  $\beta = -.18$ ,  $F(1, 97) = 3.13$ ,  $p = .08$ , 95% CI [.05, .31].

**Table 2: Intercorrelations between Value Congruence, Chronic Moral Emotions, General Psychological Illness, and Subjective Well-being Indicators (Life Satisfaction, Optimism, and Self-esteem)**

Variable	N	1	2	3	4	5	6
1. Value Congruence <sup>a</sup>	100	–	–.22*	–.18	.36**	.21*	.21*
2. Chronic moral emotions	100		–	.61**	–.53**	–.49**	–.54**
3. General psych. illness	99			–	–.45**	–.49**	–.52**
4. Life satisfaction	100				–	.59**	.62**
5. Optimism	100					–	.76**
6. Self-esteem	100						–

<sup>a</sup>Variable unreflected in order to show true direction of intercorrelations. \*  $p < .05$ . \*\*  $p < .01$ .

Increased Chronic Moral Emotions was associated with decreases in each subjective well-being index. Chronic Moral Emotions explained 53% of the variance in Life Satisfaction,  $F(1, 98) = 37.26$ ,  $p < .001$ , 95% CI [40, 66]; 49% of Optimism,  $F(1, 98) = 30.95$ ,  $p < .001$ , 95% CI [36, 63]; and 54% of Self-Esteem,  $F(1, 98) = 40.21$ ,  $p < .001$ , 95% CI [41, 67]. Effect sizes were large. Increased Chronic Moral Emotions correlated with increased General Psychological Illness,  $\beta = .61$ ,  $F(1, 97) = 57.28$ ,  $p < .001$ , 95% CI [.50, .73]. Effect size was large.

### Mediation Analyses

The analyses presented in this section concern the investigation of the role of Chronic Moral Emotions as a mediator of the relations between Value Congruence and each nominated subjective well-being marker: Life Satisfaction, Optimism, and Self-Esteem. (Note that the lack of a relationship between Value Congruence and General Psychological Illness precludes mediation analysis for this variable.)

A variable may be called a mediator to the extent that it explains the relationship between the predictor and the criterion (Baron & Kenny, 1986). One set of criteria for a mediational effect are as follows: (1) That there exists an effect of predictor on criterion, not controlling for the mediator (i.e., total effect), and (2) that the effect of predictor on criterion explained by the mediator (i.e., indirect effect) be statistically significant (i.e.,  $\neq 0$ ) in the predicted direction (Preacher & Hayes, 2004). This set of criteria is preferred to a popular alternative set discussed by Baron and Kenny (1986), as the former addresses the limitations of the latter, and more directly addresses the mediation hypothesis, and is also more statistically powerful (see Preacher & Hayes, 2004). The method employing the preferred criteria that is more statistically rigorous is to generate a distribution of the indirect (or mediated) effect of predictor on criterion through re-sampling (a method known as 'bootstrapping'), where the indirect effect is defined as the product of the paths (1) from predictor to mediator and (2)

from mediator to criterion (see Preacher & Hayes, 2004). Bootstrapping provides a confidence interval for the indirect effect. If zero is not in the observed confidence interval, it can be concluded that the indirect effect is significantly different from zero at the given alpha level (i.e., that the variable under consideration mediates the effect of predictor on criterion).

The confidence interval for the indirect effect also describes the size of the effect. Preacher and Hayes (2008) recommend this method of describing the size of the indirect effect over the alternative strategy (the Baron and Kenny method). In the Baron and Kenny method, a direct effect - namely, the effect of predictor on criterion after controlling for the mediator - that is smaller than the total effect but different from zero is considered an instance of partial mediation, whereas a direct effect that is statistically indistinguishable from zero is deemed an instance of complete mediation. Preacher and Hayes (2008) argue that the coarse distinction between partial and complete mediation, as per the Baron and Kenny method, has less utility than the confidence-interval approach because of its dependence on the size of the total effect and on sample size. The authors also cite Shrout and Bolger's (2002) argument that the failure to recognise that all indirect effects are partial may result in the failure to acknowledge that other mediators may also be operational and that mediation is perhaps stronger for one group than for another. With respect to the indirect effect, Preacher and Hayes argue that the terms partial and complete are useful for describing its practical significance, but are most often problematically used to describe its statistical significance (whether likely to have occurred by chance). Thus, in this study, in accord with Preacher and Hayes (2008), the sizes of indirect effects are reported via the estimation of bootstrap confidence intervals, rather than via use of the terms partial and complete. In the study, bootstrapping was conducted using an SPSS® macro provided by Preacher and Hayes (2004). For all mediation analyses, 5000 re-samples were used.

Testing Chronic Moral Emotions as a mediator of the relations between Value Congruence and each subjective well-being index revealed that Chronic Moral Emotions mediated the relations between Value Congruence and each subjective well-being index. Specifically, each indirect effect was significant at an alpha level of .05. Value Congruence had an indirect effect of 1.45 with Life Satisfaction, 95% CI [0.09, 2.86]; 1.56 with Optimism, 95% CI [0.09, 3.34]; and 2.74 with Self-Esteem, 95% CI [0.07, 5.44]. As zero is not in any of these confidence intervals, the relations of Value Congruence with Life Satisfaction, Optimism, and Self-Esteem are indirect through Chronic Moral Emotions.

In sum, all but one of the hypothesised bivariate relationships - that between Value Congruence and General Psychological Illness - emerged. Value Congruence correlated with Chronic Moral Emotions as well as were each nominated index of subjective well-being (Life Satisfaction, Optimism, and Self-esteem). Chronic Moral Emotions related to each index of subjective well-being and to General Psychological Illness. Importantly, decreased chronic moral emotions accounted for the relations between higher Value Congruence and increases in each component of subjective well-being.

## DISCUSSION

The model of psychological health based on value congruence (Penn et al., under review) led us to hypothesise that chronic moral emotions would account for the relationships of value

cong  
Emp  
cong  
cong  
mode  
relate  
emot  
incre  
T  
meas  
mora  
betw  
emot  
exper  
episo  
and  
prelin  
dysto  
(e.g.,  
Tang  
incap  
unide  
C  
woul  
congr  
associ  
negati  
O  
of pa  
distre  
the eff  
distre  
had w  
delete  
involv  
empov  
value  
W  
PM-D  
two o  
psych  
consis  
and be  
to mea  
earlier

congruence to general psychological illness and selected indices of subjective well-being. Empirical analyses revealed mixed support for the mediation model.

As expected, levels of chronic moral emotions accounted for the relation between value congruence and each component of subjective well-being. Specifically, (a) increased congruence between subjects' personal values and behaviour was associated with small-to-moderate decrements in chronic moral emotions; (b) lower levels of chronic moral emotions related to large increases in life satisfaction, optimism, and self-esteem; and (c) chronic moral emotions explained the small-to-moderate relations between increased value congruence and increases in life satisfaction, optimism, and self-esteem.

These data support the view that value congruence impacts on subjective well-being (as measured by life satisfaction, optimism, and self-esteem) indirectly via its effect on chronic moral emotions. One might speculate that lower value congruence (that is, lower consistency between personal values and behaviour) may awaken negative moral emotions, and that these emotions, in turn, may serve to undermine subjective well-being by disrupting a healthy experience of self. Disruptions in the quality of the experience of self may manifest in episodes of moral anxiety and worry, or periods of self-loathing, and thoughts of helplessness and hopelessness about the prospects for developing a morally authentic self. These preliminary data would suggest that these chronic feelings are not only related to ego-dystonic mood states, but may contribute, in the long run, to reduced subjective well-being (e.g., life dissatisfaction, pessimism, and poor self-esteem; Penn et al., under review; Tangney, 1996). We hasten to add, however, that in as much as correlational analyses are incapable of validating causal directions we must leave open the possibility that other, as yet unidentified, causal variables and/or pathways may be at play here.

Contrary to the model proposed in this chapter, there is no evidence in these data that would support the view that chronic moral emotions explain the relation between value congruence and general psychological illness in this sample. Specifically, while the association between value congruence and general psychological illness was in the predicted negative direction, the correlation failed to achieve statistical significance.

One explanation for these non-significant results relates to sampling. The preponderance of participants recruited into the current sample evidenced low levels of morality-based distress. As a result, only a few persons in our sample may have represented the true nature of the effects of value incongruent behaviour at high score levels; and indeed of those with high distress scores, one subject with very high scores was treated as an outlier. We suspect that had we followed up the outlier as a case study, we may have gained greater insight into the deleterious impact of chronically high negative moral emotions. Further investigations involving larger samples in a diversity of university settings may provide insights that would empower clinicians to assist university students who are battling with the damaging effects of value incongruent behaviour.

We present both our positive and negative results with caution for two reasons. First, the PM-DSC could have as yet unknown problems with validity and reliability, in as much as two of its components, those designed or adapted by the lead author, have yet to be psychometrically tested. As already noted, one of the untested components of the PM-DSC consists of a single item that measures congruence between participants' self-professed values and behaviour. A common criticism of single-item measures is that they are especially prone to measurement error. Nevertheless, we defend the use of such a measure in the light of earlier work (Nunnally, 1978), which suggests that single-item measures (1) can possess

psychometric strengths that are equally or more important than any weakness with respect to measurement error; (2) are likely appropriate for providing the type of information about value congruence that was sought in this study (that is, global unidimensional information [Hudy, 1998; Wanous, Reichers, & Hudy, 1997]); and (3) may minimise participant fatigue in studies, such as the present, that require participants to answer many other items (Gardner, Cummings, Dunham, & Pierce, 1998).

## CONCLUSION

Despite the limitations of the current study, we believe that further investigation of the model, as it stands, is warranted. More specifically, we wish to suggest that since the correlational studies reported here are largely supportive of the model, examination of the causal predictions of the model seems to be one important next step. Beyond the results reported here, it is clear from a growing body of literature that moral emotions play significant roles in human life and functioning. They appear to be instrumental in supporting or sustaining psychological health, seem to contribute to a sense of well-being or distress, are related to suicidal thoughts and behaviours, and may be critical to identity formation and character development. Notwithstanding the centrality of moral emotions in human life, until relatively recently, moral emotions have been subject to little empirical scrutiny. We believe that the dearth of work in this area represents a significant lacuna in the body of psychological literature. We are thus happy to make whatever contributions we can to this emerging field, because it may assist counsellors to help students at risk, if they are suffering from value incongruence with resultant symptoms of psychological illness and moral disquietude.

## REFERENCES

- Baron, R., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Baumeister, R. F. (1991). *Escaping the self: Alcoholism, spirituality, masochism, and other flights from the burden of selfhood*. New York, NY: Basic Books.
- Braithwaite, V. A., & Law, H. G. (1985). Structure of human values: Testing the adequacy of the Rokeach Value Survey. *Journal of Personality and Social Psychology*, 49(1), 250-263.
- Bybee, J. A., & Quiles, Z. N. (1998). Guilt and mental health. In J. A. Bybee (Ed.), *Guilt and children* (pp. 269-291). San Diego, CA: Academic Press.
- Crandall, R. (1973). The measurement of self-esteem and related concepts. In J. P. Robinson & P. R. Shaver (Eds.), *Measures of social psychological attitudes* (rev. ed., pp. 45-167). Ann Arbor, MI: University of Michigan Press.
- Derogatis, L. R. (1993). *Brief Symptom Inventory (BSI): Administration, scoring and procedures manual* (3rd ed.). Minneapolis, MN: National Computer Systems.
- Derogatis, L. R. (1994). *Symptom Checklist-90-Revised (SCL-90-R): Administration, scoring and procedures manual* (3rd ed.). Minneapolis, MN: National Computer Systems.

- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49(1), 71-75.
- Gardner, D. G., Cummings, L. L., Dunham, R. B., & Pierce, J. L. (1998). Single-item versus multiple-item measurement scales: An empirical comparison. *Educational and Psychological Measurement*, 58(6), 989-915.
- Hall, A. H., Gow, K. M., Penn, M. L., & Jayawickreme, E. (2011). Strength and weakness of character: Psychological health and resilience. In M. J. Celinski & K. M. Gow (Eds.), *Continuity versus creative response to challenge: The primacy of resilience and resourcefulness in life and therapy*. New York: Nova Science Publishers.
- Hudy, M. J. (1998). *Student evaluations of overall teaching effectiveness: Can single-item measures be justified?* Doctor of Philosophy dissertation, Ohio State University, USA.
- Kroll, J., Egan, E., Erickson, P., Carey, C., & Johnson, M. (2004). Moral conflict, religiosity and neuroticism in an outpatient sample. *The Journal of Nervous and Mental Disease*, 192(10), 682-688.
- Marschall, D., Sanftner, J., & Tangney, J. P. (1994). *The State Shame and Guilt Scale*. Fairfax, VA: George Mason University.
- Murray, K. M., Ciarrocchi, J. W., & Murray-Swank, N.A. (2007). Spirituality, religiosity, shame and guilt as predictors of sexual attitudes and experiences. *Journal of Psychology and Theology*, 35(3), 222-234.
- Nunnally, J. C. (1978). *Psychometric theory*. New York, NY: McGraw-Hill.
- Penn, M. L., Jayawickreme, E., Atanasov, P., & Schien, A. (under review). *Akrasia and mental health: A cross-cultural study*. Manuscript submitted for publication.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36(4), 717-731.
- Preacher, K. J., & Hayes, A. F. (2008). Contemporary approaches to assessing mediation in communication research. In M. Slater, A. F. Hayes, & L. B. Snyder (Eds.), *The Sage sourcebook of advanced data analysis methods for communication research* (pp. 13-54). Thousand Oaks, CA: Sage Publications.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67(6), 1063-1078.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7(4), 422-445.
- Tangney, J. P. (1996). Conceptual and methodological issues in the assessment of shame and guilt. *Behavior Research and Therapy*, 34(9), 741-754.
- Wanous, J. P., Reichers, A. E., & Hudy, M. J. (1997). Overall job satisfaction: How good are single-item measures? *Journal of Applied Psychology*, 82(2), 247-252.