The Cross-Cultural Relevance of Indigenous Measures: The South African Personality

Inventory (SAPI), Family Orientation, and Well-Being in New Zealand

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Abstract

Indigenous personality research often remains limited to its cultural context of origin. Previous cross-cultural examinations of indigenous models have typically focused on East–West comparisons and have paid scant attention to the predictive validity of indigenous models in new contexts. The present study addresses the replicability of the South African Personality Inventory (SAPI) and its predictive validity for family orientation and well-being in New Zealand European ($n = 428$) and Māori students ($n = 226$). The structure of the SAPI in New Zealand was equivalent to the structure identified in South Africa and had metric invariance between the two New Zealand groups. The SAPI social-relational scales explained additional variance above neuroticism, extraversion, conscientiousness, and openness in family orientation, but not in well-being. Mediation path analyses suggested that personality played a similar role for family orientation and well-being in the two groups when assessed by the SAPI, although group differences were suggested when using the Big Five Inventory. Our findings indicate that indigenously derived models, developed with the aim to represent culturally salient concepts, can be relevant well beyond their culture of origin and offer an enriched understanding of personality's role for important outcomes across cultures.

Keywords: personality and culture, emic–etic approach, indigenous models, cross-cultural research, social-relational concepts

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After decades of opposition between indigenous, culturally specific (emic) and universalistic (etic) approaches to personality, there is increasing support for an integrated emic–etic perspective (Cheung et al., 2011). In the emic–etic approach, a personality model is developed in a specific cultural context from local sources, and is subsequently compared with universal models. The majority of emic–etic research has explored the structure of indigenous personality models within the culture where each model was developed. There is limited knowledge on the wider cross-cultural replicability of indigenous models, and even less knowledge on their predictive validity across cultures. The present study addresses this gap by examining the structure and predictive validity of a personality model developed from an indigenous perspective in South Africa (Fetvadjiev et al., 2015), in two groups in a different cultural context: New Zealand Europeans and Māori.

Integrating Perspectives: From Indigenous to Emic–Etic

In the etic approach to personality, the focus is on establishing the dimensions of personality that are universal, such as the Big Five model (e.g., Allik et al., 2017; McCrae et al., 2005; Schmitt et al., 2007). This approach has been efficient in advancing cross-cultural comparisons. Yet, questions have been raised on the extent to which universal models are comprehensive in their representation of personality in various cultures (Cheung et al., 2001, 2011; Church, 2010, 2017; Heine & Buchtel, 2009).

In the emic approach, which emerged in opposition to the decontextualized view of etic research, the focus is on personality aspects that are particularly salient in a given culture, such as the notion of *amae* (indulgent attachment) in Japan, *yuan* (predestined relationship) in Taiwan, and *pakikipagkapwa* (shared identity) in the Philippines (Church, 2010; Kim et al., 2006). Although the emic approach is informative on the personality concepts in a given

culture, it is often not known to what extent these constructs are unique or can be accommodated in broader and more widely shared personality frameworks (Cheung et al., 2011). The emic–etic approach emerged to address this limitation.

The emic–etic approach (Cheung et al., 2011) seeks to integrate cultural specificity and universality by addressing three questions. First, what is the underlying structure of personality in a given culture, and how does it relate to established universal models? Several projects have developed personality models in non-Western cultures such as the Philippines (Katigbak et al., 2002), China (Cheung et al., 2001, 2013), South Africa (Fetvadjiev et al., 2015; Nel et al., 2012), and countries of the Levant (Zeinoun et al., 2017). Joint factor analyses of scales measuring indigenous and universal models tended to show a fair amount of overlap; yet indigenous models tended to include distinctive elements not subsumed under the Big Five, such as interpersonal relatedness (Cheung et al., 2013), positive and negative social-relational concepts (Fetvadjiev et al., 2015), and honesty–integrity (Zeinoun et al., 2017). This line of research has thus suggested that indigenous models provide additional understanding of social-relational functioning, at least in non-Western societies.

Second, is each indigenous model unique to its culture of origin or can it be replicated in other cultures? Although the initial aim of indigenous research is to identify locally salient concepts, it is informative to examine if these concepts are relevant in other cultures. Cross-cultural research on the Chinese Personality Assessment Inventory (CPAI) has found that its structure could be replicated in several Asian cultures (Cheung et al., 2013) as well as the USA (Cheung et al., 2003; Lin & Church, 2004). This line of research suggests that emic–etic studies have the potential to elucidate concepts that may be of wider relevance but which may have been underrepresented in Western-developed models (Cheung et al., 2011).

Third, does an indigenous model offer any incremental validity in predicting relevant outcomes? The CPAI factor of interpersonal relatedness has been found to explain additional

variance in filial piety beyond the Big Five in China (Zhang & Bond, 1998) and had unique

associations beyond the Big Five with specific interpersonal behaviors such as quarreling and

gift giving in China, Korea, Japan, and the USA (Cheung et al., 2013). Furthermore,

interpersonal relatedness had a small incremental validity for job performance over a Western

measure of mental ability in Chinese immigrant workers in Romania, but no incremental

validity in Romanian workers (Ion et al., 2016). Finally, in one of the few studies of

incremental predictive validity beyond Asia, Burtăverde and colleagues (2018) found that a

lexically derived personality instrument in Romania explained variance in socially adaptative

behaviors and outcomes above the Big Five and the HEXACO model. This line of research

has drawn attention to the potential of indigenously derived concepts to explain variation in

relevant outcomes across cultures.

　　　In summary, previous emic–etic research has identified indigenous personality

concepts beyond the Big Five, which often involve social-relational constructs, replicate

fairly well across cultures, and add to the prediction of relevant outcomes. However, this

literature has some notable limitations. First, the examination of Asian indigenous concepts

and comparisons of Asian and Western participants have so far dominated the field (Church

& Katigbak, 2017). Other world regions have been less studied and there has been, to our

knowledge, no comparative personality research in Oceania using non-Western models.

Second, although a fair amount of research has examined the first basic question of the emic–

etic approach (the empirical relation of indigenous and universal models), much less research

has been done on the cross-cultural replicability of indigenous models. Finally, with the

exception of the studies on the behavior correlates of the CPAI (Cheung et al., 2013; Ion et

al., 2016), the predictive validity of indigenous concepts has only been assessed in their local

context of origin, generating limited knowledge on their broader relevance. The replicability

and predictive validity of indigenous constructs have thus been identified as frontier topics in

cross-cultural personality research (Church, 2017; Church & Katigbak, 2017). The present study addresses these questions by examining the cross-cultural replicability of a personality model developed in South Africa, as well as its predictive validity for family orientation and well-being, in two ethnic groups in New Zealand.

The South African Personality Inventory (SAPI)

The SAPI was developed from an indigenous perspective in South Africa, aiming to capture the underlying dimensions of personality common to the country's four ethnocultural groups and 11 official languages (Fetvadjiev et al., 2015; Nel et al., 2012; Valchev et al., 2013). The model encompasses six factors: Positive and Negative Social-Relational, Neuroticism, Extraversion, Conscientiousness, and Openness, and is thus similar to the Big Five, although with an expanded social-relational domain. Joint factor analyses and multiple regressions of the SAPI with various Big Five measures indicated that the two social-relational factors captured variance that could not be subsumed under the Big Five (Fetvadjiev et al., 2015; Valchev et al., 2014). The SAPI was designed with an eye to cultural comparability, engaging cultural and language experts to ensure the psychological equivalence of concepts and using simple language to maximize the linguistic equivalence and translatability of items. As a result, the SAPI had structural equivalence across groups in South Africa (Fetvadjiev et al., 2015). Furthermore, a study on an early version of the SAPI's social-relational scales found them to be structurally equivalent across various ethnic groups in the Netherlands (Valchev et al., 2014). However, no research to date has addressed the replicability of the complete SAPI model – or, to our knowledge, of any African-derived personality model – in populations outside Africa.

The SAPI social-relational scales have demonstrated incremental validity for prosocialness in South Africa (Valchev et al., 2014). Yet, it is not known if the predictive validity of the SAPI would extend to different outcomes and cultural contexts. By assessing

the structural replicability and predictive validity of the SAPI in a new cultural context, the present study aims to evaluate the extent to which the SAPI is a purely indigenous model of personality, or a model with a wider cross-cultural relevance.

New Zealand Cultural Background, Family Orientation, and Well-Being

New Zealand is historically a bicultural, and in recent years gradually moving toward a multicultural society. The two largest groups are New Zealand Europeans (74% of the population) and Māori (15%); other groups include Pacific, Asian, African, and Middle Eastern (Statistics New Zealand, 2014). The Māori group has generally been seen as more collectivistic than the European group (Durie, 1998; Harrington & Liu, 2002; Jose & Schurer, 2010). Cross-country research has not revealed any major deviations of New Zealand from other countries with respect to the Big Five model (Schmitt et al., 2007). The main approach to psychological research and assessment in New Zealand has been to use Western measures in all groups, despite the recognition that some Māori concepts may not be captured well in Western models (Macfarlane et al., 2011; Reese et al., 2014).

One set of concepts that are especially salient in New Zealand are those related to family connectedness. Family orientation is particularly important in the Māori group. The Māori term for family, *whānau*, denotes a broad concept that includes extended family. The main characteristics of whānau are that it involves a sense of responsibility, caring, nurturing, support, and a relational identity (Cram & Kennedy, 2010; Edwards et al., 2007; Stuart & Jose, 2014). Another interesting characteristic is that the concept of whānau can be used for groups of people who are not genetically related but share a common goal. Finally, although the term whānau is of Māori origin, it is widely used also by European New Zealanders, especially in the broad sense of a relational network providing meaning and belonging (Moeke-Pickering, 1996).

It is interesting to consider the role of personality for family orientation. Using the Multidimensional Personality Questionnaire (Patrick et al., 2002), a longitudinal study in New Zealand found that adolescents' dispositions of positive emotionality, negative emotionality (inversely), and constraint predicted the quality of their relationships with their parents eight years later (Belsky et al., 2003). Given the focus of social-relational personality factors, such as those measured in the SAPI, on maintaining harmonious relations, these factors can also be expected to contribute meaningfully to family orientation.

The importance of family orientation in New Zealand is further underscored by its role for well-being. Stuart and Jose (2014) found that family connectedness longitudinally predicted well-being in Māori adolescents. This finding is in line with studies in other, Western cultures that have found that family cohesion (Fosco et al., 2012), helping family members (Schwartz et al., 2009), and communicating with family (Jackson et al., 1998) are positively related to various aspects of well-being.

Finally, universal models such as the Big Five, notably the dimensions of extraversion, neuroticism, and conscientiousness, have a well-established role for well-being (Steel et al., 2008). The contribution of social-relational personality aspects to well-being is less clear and may vary across cultures. Relationship quality has been found to have a broader effect on well-being in Asian and Asian American as compared to European American individuals (Kang et al., 2003). In New Zealand, relationships appear to have a stronger association with well-being in Māori than in the overall population (Statistics New Zealand, 2015). Still, the role of social-relational personality factors for well-being across cultures has received little research attention.

In summary, literature from various cultural contexts suggests that personality is related both to functioning in the family (Belsky et al., 2003) and to well-being (Steel et al., 2008), and that an individual's family relations are also related to well-being (Fosco et al.,

2012; Jackson et al., 1998; Schwartz et al., 2009). These separate lines of research suggest that a part of personality's effects on well-being may be mediated by the individual's orientation toward and engagement with family relations. In New Zealand, family and broader interpersonal relations are especially important in the Māori group, which may make a personality instrument with a rich social-relational domain relevant for this group (Durie, 1998; Moeke-Pickering, 1996; Stuart & Jose, 2014). It is thus important to examine, to what extent New Zealand Europeans and Māori differ in the links of personality factors with family orientation and well-being.

Present Study

The present study addresses three research questions.

Research Question 1: Does the SAPI model replicate in New Zealand?

This is the first study to address the SAPI's replicability beyond South Africa, and one of still a few studies to assess a non-Western instrument's replication in a different context. New Zealand shares with South Africa the presence of different cultural groups, but also the dominant use of English in psychological testing. Given results from an early version of the SAPI social-relational scales (Valchev et al., 2014) and similar studies on the CPAI (Lin & Church, 2004), a fair replicability of the SAPI can be expected. We address this question by, firstly, comparing the factor structures of New Zealand Europeans and Māori to the common structure in South Africa, and secondly, assessing the level of invariance between the two New Zealand groups.

Research Question 2: Do the SAPI social-relational factors offer incremental validity above Neuroticism, Extraversion, Conscientiousness, and Openness in explaining variance in family orientation and well-being?

Given the SAPI's rich representation of social-relational concepts (Valchev et al., 2013, 2014), it can be expected that the SAPI offers incremental validity in explaining

variables of interpersonal orientation, such as family orientation. The expectation for well-being is less straightforward. The importance of interpersonal relations for well-being may vary across cultures (Cheung et al., 2013; Kang et al., 2003), so the general incremental validity of social-relational personality constructs for well-being is an open question.

Research Question 3: Does the role of personality for family orientation and well-being differ between New Zealand Europeans and Māori?

To address this question, we construct a mediation model where personality's effects on well-being are partially mediated by family orientation, and we compare the results in the two groups. We use two personality instruments: the SAPI, which offers a rich representation of social-relational concepts, and the Big Five Inventory (Benet-Martínez & John, 1998), which has been used extensively in cross-cultural research, including New Zealand (Schmitt et al., 2007), but offers a more limited coverage of social-relational concepts.

Method

Sample and Power Analysis

The sample included 428 New Zealand European (M_{Age} = 19 years, SD = 2; 73% female) and 226 Māori (M_{Age} = 20 years, SD = 3; 79% female) students at Victoria University of Wellington. Students participated for course credit or were rewarded with a supermarket voucher. Participation was voluntary and informed consent was obtained. In line with the terms of the informed consent, the data are available on request from the first author.

The primary consideration in determining the target sample size was the ratio of cases to facets for the factor analysis of the SAPI for the purposes of model convergence; the aim was to reach at least 10 participants per each of the 18 SAPI facets. We used G*Power 3.1 (Faul et al., 2007) to estimate the statistical power of our sample sizes for the multiple regression. For small to medium effects and an alpha level of .05, our sample sizes had a power of over .70 (e.g., for f^2 = .03 and n = 226, power = .74; with n = 428, power = .95).

Measures

All measures were administered in English using an online questionnaire. We used a 5-point Likert scale with responses ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). We report the measurement invariance of all instruments in the first section of the Results.

Personality

We measured personality using two instruments. First, the SAPI, described in detail in Fetvadjiev et al. (2015), includes 18 facets that define six factors (with number of items, an example item, and Cronbach's alpha per domain in New Zealand Europeans and Māori, respectively): Positive Social-Relational (47, e.g., "I care for others"; .95 and .94); Negative Social-Relational (22, e.g., "I cause fights"; .89 and .90); Neuroticism (18, e.g., "I get scared easily"; .89 and .86); Extraversion (13, e.g., "I chat with many people"; .89 and .87); Conscientiousness (37, e.g., "I do things with precision"; .91 and .90); and Openness (21, e.g., "I seek new experiences"; .87 in both groups). The Cronbach's alphas of the 18 facets are presented in Table 1. Second, we used the Big Five Inventory (Benet-Martínez & John, 1998), which includes scales of Agreeableness (9, e.g., "Is considerate and kind to almost everyone"; .77 and .75), Neuroticism (8, e.g., "Worries a lot"; .84 and .82), Extraversion (8, e.g., "Is talkative"; .87 and .85), Conscientiousness (9, e.g., "Does a thorough job"; .79 and .83), and Openness (10, e.g., "Is inventive"; .78 and .72).

Family Orientation

We constructed a scale to measure family orientation based on a review of the literature on family orientation in New Zealand. We constructed 15 items, aiming to include the aspects of responsibility, commitment, and the extension of family-like relations to non-kin relations (Cram & Kennedy, 2010; Edwards et al., 2007; Moeke-Pickering, 1996). We found support for a bifactor model (Reise et al., 2010) capturing a general factor of family orientation as well as three specific factors of responsibility (e.g., "I take responsibility for

my role in my family"), commitment (e.g., "I give priority to the goals of my family above

my own goals"), and extension (e.g., "I form strong social relationships by treating others

like family"). We removed four items due to ambiguous loadings or differing loading

patterns between the two groups in order to enhance the interpretability of the scores and

reduce culture-specific variation that would impede group comparisons. The 11 items we

retained are presented in the Appendix. We used the mean scores of the general factor for the

present study. The Cronbach's alpha of the general factor was .87 in New Zealand Europeans

and .85 in Māori.

To assess the construct validity of the family orientation scale beyond its internal

structure, we used the conceptually related, Related Self-in-Family scale by Kagitcibasi

(2007), which contains 9 items (e.g., "Feeling very close to the family is a good thing";

Cronbach's alpha = .93 in New Zealand Europeans and .91 in Māori). The family orientation

scale correlated (in New Zealand Europeans and Māori, respectively) at .74 and .58 with the

Related Self-in-Family scale; .54 and .41 with the SAPI Positive Social-Relational scale; .42

and .25 with the BFI Agreeableness scale; and .31 in both groups with the well-being scale.

The differences between the correlations of the family orientation scale with the

(conceptually closest) Related Self-in-Family scale and the other correlations were significant

at $p < .001$, and the pattern of correlations supported the validity of the family orientation

scale as related, but distinct from relevant personality measures.

Well-Being

We measured well-being using the Satisfaction With Life Scale (Diener et al., 1985),

which contains five items (e.g., "In most ways my life is close to my ideal") and had

Cronbach's alpha of .89 in New Zealand Europeans and .86 in Māori.

Results

Replicability and Invariance

To assess the replicability of the SAPI, we first conducted exploratory factor analysis (EFA) extracting six factors. The factor loadings are presented in Table 1. As can be seen in the table, the structures in both groups resembled closely the South African structure (Fetvadjiev et al., 2015), albeit with some deviations such as the lack of loadings of Traditionalism–Religiosity on any factor and the primary loading of Playfulness on Openness (instead of Extraversion) in the Māori group. We target-rotated the solution in each group toward the pooled-within solution of four ethnocultural groups in the reference sample in South Africa (Fetvadjiev et al., 2015, Table 2). The Tucker's phi congruence coefficients ranged from .90 to .99, with a mean of .95 in New Zealand Europeans and .93 in Māori. Furthermore, we target-rotated the structure in Māori toward the structure in New Zealand Europeans, and found congruence coefficients between .89 and .98, with a mean of .95. These findings indicated a fair to excellent degree of structure equivalence (Lorenzo-Seva & Ten Berge, 2006) both with reference to the common South African structure and between the two groups in New Zealand.

For a further assessment of the levels of measurement invariance of the SAPI in New Zealand Europeans and Māori, we conducted multiple-group invariance tests in a structural equation-modeling framework in M*plus* version 7.4 (Muthén & Muthén, 2012). We started with confirmatory factor analysis (CFA), specifying a correlated-factor model. This baseline model had a poor fit to the data in both groups (summarized in the top panel of Table 2), as could be expected given the overly rigid restrictions of CFA for complex personality models (Hopwood & Donnellan, 2010). To accommodate the complexity of the model, we conducted exploratory structural equation modeling (ESEM), which allows cross-loadings and provides better fit to complex personality data than CFA, while enabling stricter tests for measurement invariance than EFA (Marsh et al., 2010). The baseline model had a good fit in both groups (Table 2) as well as in the total sample (CFI = .97, RMSEA = .07). We compared nested

models at increasing levels of invariance: configural, metric, and scalar. Using the criterion of ΔCFI < .01 (Cheung & Rensvold, 2002), we found that the SAPI had metric invariance between New Zealand Europeans and Māori (Table 2).

We also assessed the measurement invariance of the other instruments used in the study; the results are presented in the lower part of Table 2. The item-level CFA for the BFI yielded unacceptable fit (for the total sample, CFI = .68), as could be expected for an item-level analysis of a complex model (Hopwood & Donnellan, 2010). We hence parceled the items into three parcels per factor, including positive and negative items in each parcel, and conducted CFA and ESEM on the parcels. Although the CFIs were acceptable (over .90) both in the CFA and ESEM models, the TLI reached .90 and the RMSEA dropped below .08 only in the ESEM model. The ESEM results suggested scalar invariance of the BFI between the two groups. Finally, scalar invariance was also found for the bifactor CFA model of family orientation and the single-factor CFA model of satisfaction with life (see Table 2).[1]

In conclusion, in response to Research Question 1, the SAPI displayed the same underlying structure in New Zealand as it did in South Africa. This structure was supported in ESEM, going beyond the descriptive results of EFA and target rotation. The SAPI was equivalent between New Zealand Europeans and Māori at the level of metric invariance, and the other instruments had scalar invariance, allowing comparisons of the links between concepts in the two groups.

Predictive Validity

We ran multiple regressions on family orientation and well-being as separate outcomes, entering the SAPI scales of Neuroticism, Extraversion, Conscientiousness, and Openness as predictors in the first step and the two Social-Relational scales in the second step. The R^2 values and regression coefficients are presented in Table 3. The addition of the

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[1] The higher RMSEA of the baseline and configural models for the Satisfaction with Life Scale (Table 2) could be attributed to the small *df* of these models (Kenny et al., 2015). The high CFI and TLI suggest that these models may nonetheless be accepted.

social-relational scales increased the explained variance in family orientation by .05 in New Zealand Europeans and .02 in Māori; there was no significant change for life satisfaction. In response to Research Question 2, the SAPI social-relational concepts had small incremental validity for family orientation above the other four factors, but not for well-being.

Group Differences

We constructed mediation path models where the effects of personality on well-being are partially mediated by family orientation. We estimated these models in multigroup path analysis, separately using the SAPI (Figure 1) and the BFI (Figure 2). We started with saturated models and trimmed them down by removing nonsignificant paths. The models' goodness-of-fit indices are presented in Table 4.

For the SAPI (Figure 1), the equal-weights model fit the data equally well as the unconstrained model (ΔCFI < .01; see Table 4), indicating that the path coefficients were identical between the two groups. Neuroticism, Extraversion, and Conscientiousness had direct effects on satisfaction with life, whereas the other three personality factors had indirect effects mediated by family orientation. It is interesting to note that Neuroticism had a positive effect on family orientation, suggesting that family orientation serves as a partial buffer of Neuroticism's adverse effects on well-being. The model's R^2 values for family orientation and life satisfaction were .34 and .34 in New Zealand Europeans, and .33 and .33 in Māori, respectively, indicating similar explanatory power of the SAPI in both groups.

For the BFI (Figure 2), the equal-weights model fit worse than the unconstrained model (ΔCFI = .05; see Table 4), indicating group differences in the size of the path coefficients. Four path coefficients were released in consecutive steps, leading to a partial-equal-weights model satisfying the criterion of ΔCFI < .01. The overall model was similar to the SAPI path model apart from the lack of effects of Openness. However, the BFI path model was not equivalent between the two groups. The effects of Neuroticism and

Conscientiousness on family orientation were only significant in New Zealand Europeans; the direct effect of Extraversion on life satisfaction was only significant in Māori; and the direct effect of Neuroticism on life satisfaction was higher in New Zealand Europeans than in Māori (see Figure 2). The model's R^2 for family orientation and life satisfaction were .27 and .34 in New Zealand Europeans, and .16 and .25 in Māori, respectively. The BFI path model thus explained substantially more variance in family orientation and well-being in New Zealand Europeans (similar to the variance explained by the SAPI) than in Māori.

In conclusion, in response to Research Question 3, the mediation path analyses suggested that personality played a similar role for family orientation and well-being in the two groups when assessed by the SAPI, whereas several different effects were observed between the groups when using the BFI. The SAPI was beneficial for explaining variance in family orientation and well-being particularly in the Māori group; the explanatory power of the two instruments was closer in New Zealand Europeans.

Discussion

The present study examined the cross-cultural replicability of the SAPI and its predictive validity in a multicultural context including Europeans and Māori in New Zealand. We found, firstly, that the SAPI's factor structure in both groups in New Zealand was equivalent to the reference structure in South Africa (Fetvadjiev et al., 2015), and that the SAPI had metric invariance between the two New Zealand groups. Secondly, the SAPI social-relational scales explained additional variance above neuroticism, extraversion, conscientiousness, and openness in the locally salient concept of family orientation, but not in well-being. Finally, mediation path models suggested equivalent effects of personality on family orientation and well-being in both ethnic groups when personality was assessed using the SAPI, yet there were several group differences when using the BFI.

Personality Structure Across Cultures

This is one of the first studies to go beyond East–West comparisons and to examine the replicability of an African-derived model in another part of the world. In line with research on the replicability of the CPAI beyond China (Cheung et al., 2013; Lin & Church, 2004), we found that the SAPI replicated in a new, multicultural context. Using the ESEM technique, we were able to go beyond the usual focus on structure replication and found support for metric invariance. These findings suggest that the concepts of the SAPI model are not bound to particular cultural features of South Africa, but have wider applicability. Indigenously derived models may thus have much broader cross-cultural relevance reaching well beyond the context of their original identification.

To the best of our knowledge, this is the first study to examine a non-Western personality measure in New Zealand, and in Oceania more broadly. This vast and diverse region has received little attention in the area of indigenous personality, and assessment is usually based on imported models (Macfarlane et al., 2011; Reese et al., 2014). Our findings indicate that a model emphasizing social-relational concepts can offer new insights on personality in this region, while at the same time maintaining a high level of cultural comparability between New Zealand Europeans and Māori.

What are the factors that make possible the high level of cross-cultural comparability we found for the indigenously derived SAPI in two different groups in a different world region? The main factor in our view is that the SAPI was developed using a decentered approach, where the model and instrument development starts with a broad cross-cultural perspective by design (Fetvadjiev et al., 2015; Van de Vijver & Leung, 1997). The SAPI model is based on personality descriptions derived in 11 distinct languages, taking into account the commonality in content across these languages. The items of the SAPI have been written following rules to make them easily understandable and translatable (Hambleton & Zenisky, 2011) so as to be applicable across cultural groups in South Africa. Our findings

indicate that the focus on cross-cultural applicability and translatability in the development of

an instrument increases the scope for further cross-cultural comparisons.

It will be worthwhile for future research to explore personality in Māori and other

Polynesian cultures starting from local, indigenous concepts. For example, we conceptualized

family orientation as a characteristic adaptation separate from the core of personality. It is an

open question whether family orientation may rather be perceived as an integral component

of the indigenous conception of personality in Māori, similarly to the CPAI model in China

(Cheung et al., 2013). Furthermore, the language in which personality is assessed is known to

affect both the underlying structure and the elevation of responses (Chen & Bond, 2010;

Rossier et al., 2013). Would the SAPI show similar structure when administered in the Māori

language or in other Polynesian societies, such as Cook Islands Māori? Our study draws

attention to the need for a dedicated program of indigenous research on personality in New

Zealand and Oceania.

Predictive Validity Across Cultures

The majority of previous indigenous and emic–etic research has dealt with the

structure of personality concepts and their replication across cultures (Church, 2017). Much

less work has been done on the cross-cultural predictive validity of instruments developed in

this tradition. As a result, little has been known about the practical benefits of using

indigenously derived measures in cross-cultural comparisons. Our study addresses this gap

and highlights the predictive validity of the SAPI social-relational components. In line with

research on filial piety in China (Zhang & Bond, 1998), prosocialness in South Africa

(Valchev et al., 2014), and various interpersonal behaviors in Asia (Cheung et al., 2013), we

found that the SAPI social-relational components offered incremental validity above the other

four factors for a relation-focused outcome (family orientation); yet they had no unique

contribution to well-being. The predictive utility of indigenously derived models can thus be

extended to further understudied contexts. Cross-cultural research that remains restricted to purely emic or etic models may miss out on important personality aspects for predicting relevant outcomes.

The concept of family orientation, although salient in New Zealand, has broader cross-cultural relevance, as evident, for example, in research on the autonomous and related self in family across cultures (Kagitcibasi, 2007). It is thus interesting for future research to expand the cross-cultural basis of comparisons in family orientation using both universal and indigenously derived models. It has been recognized recently that the role of family relations for motivation and other self-relevant processes has been underestimated in personality and social psychology (Daly et al., 1997; Ko et al., 2019). Our study draws attention to family orientation as an important element of the nomological network of social-relational personality concepts.

The lack of incremental validity of the social-relational domain within the SAPI for life satisfaction is in line with research identifying extraversion, neuroticism, and conscientiousness as the most consistent personality correlates of life satisfaction (Steel et al., 2008). It is conceivable that the social-relational aspects are related to other aspects of broad well-being, such as self-esteem (Kang et al., 2003) or happiness (Steel et al., 2008). Furthermore, the links of personality and well-being have been shown to be moderated by culture-level factors such as wealth and competitiveness (Bond, Lu, Lun, & Smith, 2020), and these factors should be taken into account in future research on personality and well-being.

Methodological Considerations

It is informative to discuss some methodological implications for research on cultural similarities and differences. The SAPI was efficient in identifying a culturally equivalent mediation path model of personality, family orientation, and well-being in New Zealand

Europeans and Māori (Figure 1), whereas several of these links varied notably between the

two cultures when using the BFI (Figure 2). We discuss two related explanations for these

results. Firstly, the SAPI may offer an enhanced representation, compared to the BFI, of

concepts that are especially relevant for family orientation and well-being in the Māori

group.[2] Secondly, using a longer instrument with a broader construct coverage may generally

be beneficial for cultural group comparisons. The second interpretation is not a foregone

conclusion. In large-scale cross-cultural research, an interesting paradox has been observed:

Longer instruments are more informative than shorter ones, but are at the same time less

likely to show high levels of measurement invariance (Van de Vijver, 2018). Indeed, the

(relatively long) SAPI was the only instrument that did not reach scalar invariance in the

present study. Our results suggest that a trade-off may be necessary. Shorter instruments may

more easily reach scalar invariance, affording group mean comparisons; longer, especially

culturally informed instruments, on the other hand, may fail to reach scalar invariance but

(provided they show metric invariance) may enhance the cultural comparability of causal

path models.

In conclusion, our findings demonstrate that it is important to go beyond invariance

testing of measurement models and to assess the equivalence of path models. The integration

of emic and etic elements in such analyses holds promise for enhancing the cross-cultural

comparability of path models relating personality to psychological outcomes.

Limitations and Future Directions

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[2] We examined this possibility in a series of post-hoc hierarchical regressions predicting family orientation and well-being from the BFI in the first step, and adding each of the SAPI scales separately in the second step (the two social-relational scales were added jointly). The SAPI scales that stood out with their added explained variance in Māori were the social-relational scales (ΔR^2 of .11 and .06 for family orientation and well-being, respectively) and Conscientiousness (ΔR^2 of .16 and .07, respectively). The ΔR^2 for New Zealand Europeans were lower, on average by .05. The other scales had smaller incremental value for Māori and generally smaller differences in incremental value between the two groups. This follow-up analysis suggested that, compared to the BFI, the SAPI may be beneficial especially in the Māori group and especially by adding variance in the social-relational domain and conscientiousness.

Some limitations of the present study have to be acknowledged. This was a cross-sectional study, so we cannot make claims about the causal direction of the links between personality, family orientation, and well-being. Previous research suggests that at least some of these links are likely to be bidirectional (Soto, 2015). A longitudinal study could assess the relative strength of the effects of each construct over time. Furthermore, our study used a student sample, yet the dynamics of personality and family relations may vary across ages (Finn et al., 2017). The developmental trajectories in the links of personality and family context across cultures are an area ripe for investigation.

An important limitation of our study is the length of the BFI, which is considerably shorter than the SAPI. The SAPI social-relational factors have been found to be distinct from the Big Five using Big-Five measures of various length, including the 180-item Basic Traits Inventory, which contains 37 Agreeableness items (Taylor & De Bruin, 2005; see Fetvadjiev et al., 2015, and Valchev et al., 2014). Nonetheless, the BFI, despite its wide cross-cultural usage, has a specific content focus that does not overlap fully with other Big-Five measures (Schmitt et al., 2007). As a consequence, the cultural group differences we observed with the BFI and the enhanced group comparability of the path model offered by the SAPI cannot be generalized to the Big Five model as a whole. Future research would benefit from examining both shorter versions of the SAPI and more comprehensive measures of the Big Five model. Finally, another recent model that has been identified across languages and which pointed to an expansion of the Big Five is the HEXACO (Ashton et al., 2014). It would be interesting for future research to examine the relative contribution of the HEXACO's honesty-humility and the SAPI's social-relational factors to relevant outcomes.

Conclusion

This study adds to a growing body of literature that suggests that indigenously derived models, developed with the aim to represent culturally salient concepts of personality, can in

fact be relevant well beyond their culture of origin (Cheung et al., 2003, 2011; Lin & Church, 2004; Valchev et al., 2014). Our study considerably broadens the cultural range of these comparisons by going beyond the historically established framework of East–West comparisons and demonstrating the relevance of a model developed in South Africa, in New Zealand Europeans and Māori. Our findings highlight the utility of enriching the scope of cross-cultural research, moving from the predominant focus on structure replicability to examining the predictive validity of indigenous models across cultures (Church, 2017). Indigenously derived models hold promise for a more comprehensive understanding of personality's role for important outcomes across cultures.

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Appendix

Items of the Family Orientation Scale

I help my family members if they have a problem.

I take care of my younger family members.

I take responsibility for my role in my family.

I give guidance to younger members of my family.

I plan my future closely with my family.

I give priority to the goals of my family above my own goals.

I regularly discuss things affecting me with my family.

I spend as much time as possible with my family.

I form strong social relationships by treating others like family.

I get to know members of class/study groups well to work with them effectively.

I take responsibility for the welfare of people close to me.

Table 1

Factor Loadings and Cronbach's Alphas of the South African Personality Inventory Facets in New Zealand Europeans and Māori

Facet Scale	New Zealand European							Māori						
	SRP	SRN	N	E	C	O	α	SRP	SRN	N	E	C	O	α
Facilitating	**.46**	.15	.01	.24	.24	-.11	.86	**.55**	.12	.04	-.20	-.24	.11	.86
Integrity	**.58**	-.21	-.09	-.04	.25	.02	.82	**.47**	-.29	-.03	-.10	-.07	.19	.82
Social Intelligence	**.46**	.00	.00	**.41**	-.01	-.02	.81	**.38**	-.10	.05	**-.43**	.03	.13	.76
Interpersonal Relatedness	**.87**	-.04	-.08	-.01	-.09	-.07	.76	**.64**	-.14	.02	-.23	.15	.24	.71
Warm-Heartedness	**.84**	-.15	.12	.11	-.08	-.05	.89	**.71**	-.22	.17	-.16	.03	.18	.86
Deceitfulness	-.13	**.52**	.23	-.06	-.18	-.13	.56	.04	**.65**	.07	.10	.24	.08	.61
Conflict-Seeking	.04	**.78**	.00	.15	-.04	.10	.72	-.05	**.72**	.08	-.20	.03	.04	.72
Hostility–Egoism	-.11	**.90**	.01	-.08	.06	.03	.83	.00	**.96**	.03	.06	-.09	-.06	.86
Emotional Balance	.12	.05	**-.73**	.07	.16	-.03	.82	.11	.03	**-.72**	-.11	-.08	.16	.78
Negative Emotionality	.10	.10	**.83**	.00	.11	.01	.84	.05	.13	**.80**	.00	-.07	.04	.79
Playfulness	.06	.07	-.07	**.51**	-.01	-.19	.77	-.19	.12	-.04	**-.36**	.03	**.58**	.74
Sociability	.03	.03	-.08	**.86**	.06	.02	.89	.07	.03	-.13	**-.85**	-.10	-.05	.88
Achievement Orientation	-.08	.01	-.08	.04	**.79**	-.15	.85	.12	-.01	-.05	-.03	**-.66**	.16	.87
Orderliness	-.02	-.08	.02	-.01	**.89**	.10	.85	-.05	-.11	.03	-.03	**-.93**	-.03	.86
Traditionalism–Religiosity	.08	-.11	.09	.16	.17	-.05	.68	.27	.03	-.06	.04	-.05	-.03	.59
Intellect	.24	.15	-.29	.13	**.35**	**-.30**	.76	.14	.08	-.18	-.06	**-.41**	**.48**	.79
Broad-Mindedness	-.03	-.13	-.06	.20	-.06	**-.84**	.74	.08	.06	-.10	.00	.00	**.71**	.65
Epistemic Curiosity	.29	.04	-.01	-.22	.22	**-.49**	.75	.13	-.12	.04	.14	-.14	**.70**	.74

Note. SRP = Positive Social-Relational; SRN = Negative Social-Relational; N = Neuroticism; E = Extraversion; C = Conscientiousness; O = Openness. Factors were extracted using maximum likelihood with Oblimin rotation. Loadings with absolute value of .30 or higher are in boldface.

Table 2

Measurement Models of the SAPI, the BFI, the Family Orientation Scale, and the Satisfaction With Life Scale, in New Zealand Europeans and Māori

Instrument	χ^2	*df*	CFI	TLI	RMSEA
SAPI					
CFA					
Baseline E	871.212	120	.829	.781	.121
Baseline M	463.515	120	.850	.809	.113
ESEM					
Baseline E	173.118	60	.974	.934	.066
Baseline M	120.092	60	.974	.933	.067
Configural	293.210	120	.974	.934	.066
Metric	*395.390*	*192*	*.970*	*.951*	*.057*
Scalar	469.289	204	.960	.940	.063
BFI					
CFA					
Baseline E	313.496	80	.917	.891	.083
Baseline M	206.903	80	.907	.878	.084
ESEM					
Baseline E	56.670	40	.994	.984	.031
Baseline M	44.166	40	.997	.992	.021
Configural	100.836	80	.995	.987	.028
Metric	156.254	130	.994	.990	.025
Scalar	*184.102*	*140*	*.989*	*.984*	*.031*
Family Orientation					
Baseline E	64.586	33	.983	.972	.047
Baseline M	80.296	33	.951	.919	.080
Configural	144.882	66	.973	.954	.060
Metric	169.589	84	.970	.961	.056
Scalar	*191.832*	*91*	*.965*	*.958*	*.058*
SWLS					
Baseline E	22.096	5	.985	.971	.089
Baseline M	12.568	5	.985	.970	.082
Configural	34.664	10	.985	.971	.087
Metric	35.758	14	.987	.981	.069
Scalar	*44.080*	*18*	*.984*	*.983*	*.067*

Note. BFI = Big Five Inventory (Benet-Martínez & John, 1998); SAPI = South African Personality Inventory (Fetvadjiev et al., 2015); SWLS = Satisfaction With Life Scale (Diener et al., 1985). E = New Zealand Europeans; M = Māori. The results for family orientation and the Satisfaction With Life Scale are from CFA. The selected models are presented in italics.

Table 3

Standardized Regression Coefficients and Explained Variance in Hierarchical Multiple Regression of Family Orientation and Satisfaction with Life on the SAPI Scales

	Family Orientation				Satisfaction with Life			
	Model 1		Model 2		Model 1		Model 2	
	E	M	E	M	E	M	E	M
Neuroticism	.14**	.13*	.13**	.15*	-.39***	-.25***	-.37***	-.22**
Extraversion	.24***	.24***	.18***	.24**	.12**	.16*	.15**	.18*
Conscientiousness	.48***	.47***	.32***	.37***	.26***	.33***	.26***	.29**
Openness	-.02	-.09	-.12*	-.11	.02	-.07	.05	-.05
SOCREL-Positive			.29***	.10			-.08	-.01
SOCREL-Negative			-.11*	-.14*			-.06	-.12
Adjusted R^2	.31	.23	.36	.25	.35	.25	.35	.26
ΔR^2			.05***	.02*			.00	.01

Note. SOCREL = social-relational scales of the South African Personality Inventory (Fetvadjiev et al., 2015); E = New Zealand Europeans; M = Māori.
*p < .05. **p < .01. ***p < .001.

Table 4

Goodness of Fit of Multiple-Group Path Models of Personality, Family Orientation, and Satisfaction with Life in New Zealand Europeans and Māori

| Model	χ^2	*df*	CFI	TLI	RMSEA
SAPI → Family Orientation → Life Satisfaction					
Baseline E	3.855	3	.998	.990	.026
Baseline M	2.754	3	1	1	0
Unconstrained	6.609	6	.999	.995	.018
Equal Weights	*16.624*	*16*	*.999*	*.998*	*.011*
BFI → Family Orientation → Life Satisfaction					
Baseline E	1.613	1	.998	.983	.038
Baseline M	0.420	1	1	1.067	0
Unconstrained	2.032	2	1	.999	.007
Equal Weights	28.638	10	.954	.917	.075
Partial Equal Weights[a]	*8.124*	*6*	*.995*	*.984*	*.033*

Note. E = New Zealand Europeans; M = Māori. The selected models are presented in italics.
[a]After releasing the equality constraints on the paths from Neuroticism and Conscientiousness to family orientation, and from Neuroticism and Extraversion to life satisfaction (see Figure 2).

Figure 1

Mediation Model for the SAPI, Family Orientation, and Satisfaction with Life
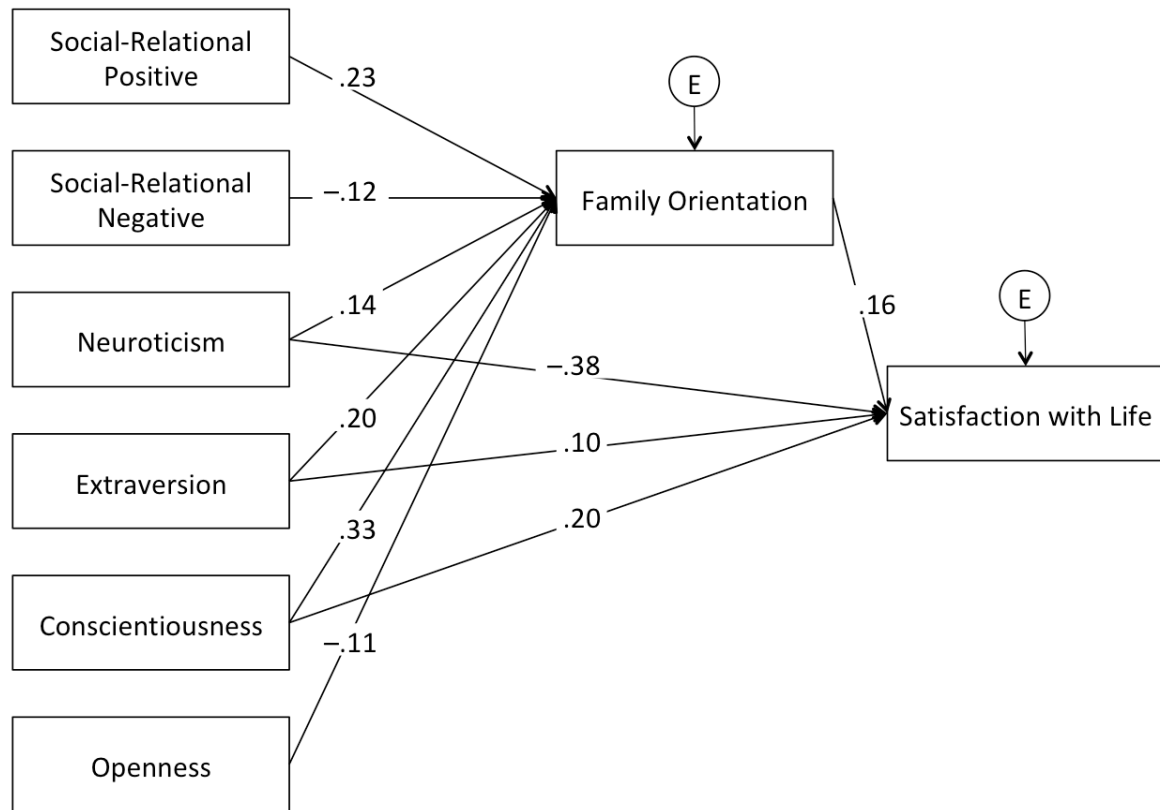
Note. The path coefficients are standardized for the New Zealand European group. All coefficients are significant at .05 or lower.

Figure 2

Mediation Model for the BFI, Family Orientation, and Satisfaction with Life
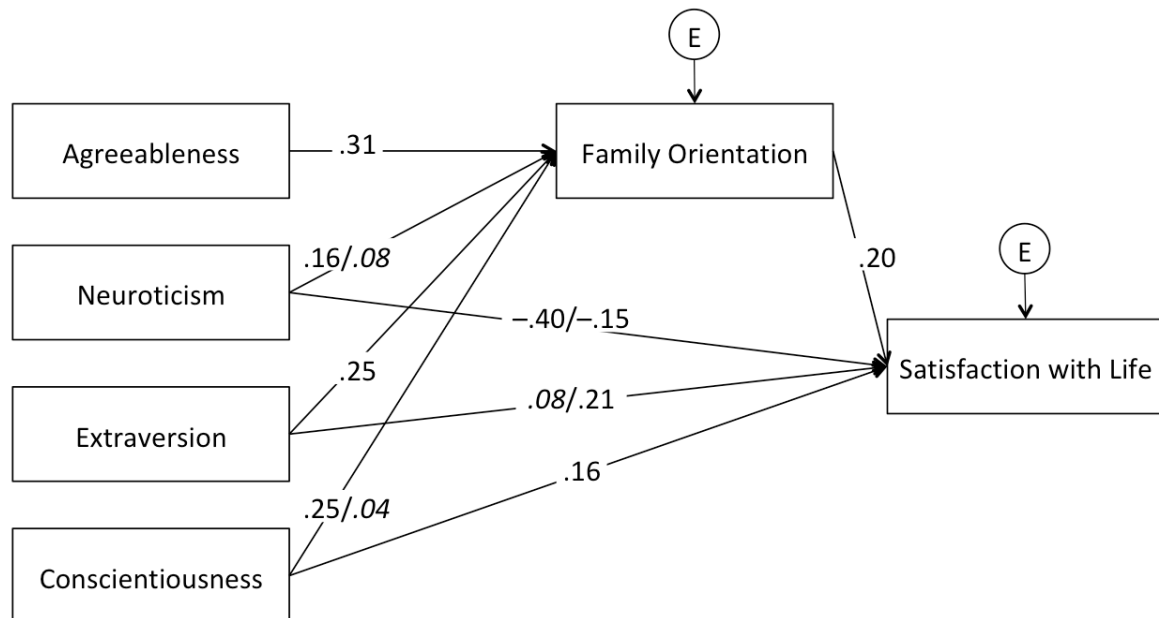
Note. The single path coefficients are standardized for the New Zealand European group; the coefficients separated by slashes are standardized for New Zealand Europeans and Māori, respectively. All coefficients are significant at .05 or lower, apart from the coefficients in italics (*ns*).