Measuring Care and Justice Moral Orientation: Italian adaptation and revision of the MMO-2 scale

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This study presents the Italian adaptation of the Measure of Moral Orientation Second Revision (MMO-2). Based on Carol Gilligan's theory of the Ethics of Care, the MMO-2 was designed to measure two complementary moral stances, namely Care and Justice. For this study, questionnaire responses from 683 university students were assessed against an Italian-adapted MMO-2 scale. Data were analysed through Exploratory Structural Equation Modelling first as separate scenarios and then as a single model. The final model comprises four intercorrelated pairs of latent variables and shows highly satisfactory goodness of fit indices with moderate construct validity and reliability. Strengths, limitations, and directions for the future developments of the MMO-2 will be discussed.

Keywords: Measure of Moral Orientation; Ethics of Care; Ethics of Justice; Exploratory Structural Equation Modelling, Composite Reliability

Introduction

In her seminal work '*In a Different Voice*' published in 1982, Carol Gilligan theorised for the first time an alternative form of ethics, namely the Ethics of Care. Gilligan made the case that human beings are not always motivated to act fairly, as Lawrence Kohlberg (1981) had argued in his model of moral development. Instead, they sometimes feel an intrinsic need to help, safeguard, and protect connections with others. This started a heated debate within the philosophical and psychological literature between those who strongly contested the existence of an ethics of care (Allmark, 1995) and those who proposed it as an alternative to the ethics of justice (Bradshaw, 1996, Noddings, 1984). Today the legitimacy of the Ethics of Care has been widely accepted (for a review see Sherblom, 2008), and the latest developments in this field of study have successfully attempted to integrate both justice and care as two complementary sides of ethical reasoning (Barnes, 2012; Held, 1995, 2006). Indeed, individuals have the potential to apply either care or justice ethical principles – or a combination of both – depending on cultural background, life choices, and contextual circumstances (see French, and Weis, 2000).

However, the Ethics of Care has not been spared from criticism (see Rachels & Rachels, 2012; Puka, 1990; Card, 1990). Among its detractors, some have highlighted methodological issues with Gilligan's work. Luria (1986) highlighted at least three shortcomings: a) relatively small and ill-specified sample size, b) absence of a reliable objective scoring system, and c) juxtapositions of disparate samples, which poses problems about combination rules. Similarly, Brabeck (1983) stressed the importance for future research of collecting quantitative data with larger samples than those used by Gilligan.

Despite the increasing importance of justice as criteria of wellbeing (di Martino, Di Napoli, Esposito, Prilleltensky, Arcidiacono ICOPPE), over the years, a small number of quantitative studies have shed more light on the relationship between the Ethics of Justice

and the Ethics of Care. Among them, the use of functional magnetic resonance imaging tests has investigated people's neuronal sensitivity to either justice or care issues (Harenski, Antonenko, Shane, and Kiehl, 2008; Robertson et al., 2007). In addition, the use of computerised response latency measures with stimulus words have explored people's tendency towards either justice or care principles (Agerström, Björklund & Carlsson, 2011).

However, the meta-analytic literature has found a lack of agreement between those who found small sex differences in moral reasoning (Walker, 1984) and those who strongly contest these findings (Baumrind, 1986). Although a recent meta-analysis conducted by You, Maeda, and Bebeau (2011) showed significant gender differences with regard to moral sensitivity, the debate is still open.

In addition to the above-mentioned studies, the bulk of quantitative investigations conducted in the Ethics of Justice and Ethics of Care domain have relied primarily on self-report instruments. Among these, the following figure prominently: a) the Moral Justification Scale (MJS) (Gump, Baker, & Roll, 2000), b) the Moral Orientation Scale using Childhood Dilemmas (MOS) (Yacker & Weinberg, 1990), c) the Assessment of Moral Orientation (AMO) (Giammarco, 2014), and d) the Measure of Moral Orientation (MMO) (Liddell & Davis, 1996), soon available in its second revision, MMO-2 (Cooper, Liddell, Davis, & Pasquesi, 2012; Liddell, 2006). All these tools vary in terms of validation procedures, sample sizes, targeted populations, structures, and measurement scales.

Despite having a well-established Ethics of Care scholarship (Saraceno, 2009; Viafora, Zanotti, & Furlan, 2007), Italy surprisingly lacks any adapted version of the above quantitative tools. This study will attempt to bridge this gap by introducing one of those instruments to the Italian context. Following extensive evaluation, we chose the Measure of Moral Orientation Second Revision (MMO-2), as the other instruments considered show several limitations. The MOS was designed for adults who are asked to imagine that they are

parenting an 8- to 10-year-old child who is faced with a series of moral dilemmas. Apart from the exclusivity of the task, this instrument has been validated only on a sample of 99 graduate students with responses coded by an expert with experience in Lyons's coding scheme (1983). Likewise, a group of experts judged the MSJ construct validity and the sample collected for validation comprised only 100 participants. Lastly, the AMO seemed to be a more robust instrument in terms of validation procedures and sample size. However, this tool needed further revisions, as stated by the author in the conclusion of the study (Giammarco, 2014); yet to date no updated version has been released.

Against this background, the MMO-2 stands out as the only currently available scale for the assessment of Justice and Care moral orientation that has undergone a rigorous series of revisions to improve its psychometric validity (Liddell & Davis, 1996; Liddell, G. Halpin, & Halpin, 1993). In addition, each scenario composing the MMO-2 has been specifically designed to be close to the experience of college and university students (Liddell, 1991), making this tool a suitable choice for exploring the Ethics of Justice and the Ethics of Care at the HE level.

Data, Methods, and Procedures

Instruments

The Measure of Moral Orientation Second revision (MMO-2) is a tool for the assessment of a person's moral inclination. Originally developed as MMO, it was designed by Debora Liddell (1991) and validated by Liddell, Halpin, and Halpin (1992). The MMO reached its latest version in a study conducted by Liddell and Davis (1996), which aimed to collect further reliability and validity evidence. The final scale was composed of 10 moral dilemmas using 79 items.

This tool comprises a series of vignettes, which are each designed to portray a situation of ethical conflict. Respondents are asked to identify themselves with each protagonist and make a moral decision, which can be driven by either justice or care principles. The following is an example of an MMO dilemma, previously proposed by Liddell and Davis (1996, p. 487):

My parents, after 30 years of a somewhat rocky marriage, are going through a divorce. My mother has been involved with another man for several years and has decided to leave the marriage. She seems very happy with her decision. Each of my parents wants me to spend semester break at his or her particular home, but my father will be very upset if I go to my mother's house because her "friend" will be there.

- strongly agree
- somewhat agree
- somewhat disagree
- strongly disagree

1. I have the right to spend time with whomever I want.
2. What I wish more than anything is to make everyone happy and not hurt them.
3. What I did would depend on how I thought each parent needed me.
4. Everyone has the right to happiness, even if the consequences are sometimes hurtful to others.

All the items comprising the MMO are measured on a four-point Likert scale, ranging from 'Strongly disagree' to 'Strongly agree'. Complementary to the scale, the authors

designed a 14-item self-description inventory to tap into the respondents' perceptions of themselves as just and/or caring people (i.e. seven items for self-justice and seven items for self-care respectively).

As mentioned above, the MMO-2 represents a newly revised version of the MMO. Following extensive item analysis, Liddell (2006) decided to reduce the range of dilemmas from ten to seven and drop the self-description items. Compared to its previous version, the MMO-2 includes a total of 52 items (26 for care orientation and 26 for justice orientation). All the remaining vignettes and items are still worded as in the previous version.

The MMO-2 scale has already been piloted on a sample of 169 university students, showing good internal reliability for Justice (α = .886) and for Care (α =.896) (Liddell, 2006). Giammarco (2014) has also provided evidence of its structural validity and convergent validity through correlations between AMO and MMO-2.

Despite this positive evidence, the MMO-2 has not been tested yet for full validation. Therefore, our study represents a good opportunity to introduce this instrument to the Italian context while also testing its psychometric proprieties. This, in turn, will offer some useful feedback for the future development of the scale.

Translation

The MMO-2 has undergone a rigorous process of translation and back-translation to ensure its applicability to the Italian context (Brislin, 1970). Three versions of the scale – namely the original English version, its Italian rendering, and the English version translated from Italian – were compared to test for equivalence between the original (i.e. American English) and the target language (i.e. Italian). Two independent researchers carried out the translations, whilst the first author of this study oversaw the process. All the researchers involved in this process are proficient in both English and Italian. The back-translation generated a high general agreement on the majority of the items composing the MMO-2. Only

minor disagreements were found, and their reconciliation proved useful in enhancing the overall quality of the translation. The disagreements pertained mainly to cultural differences between the Italian and the American university systems. This led to rephrasing some of the MMO-2 items and scenarios. For example, proper names were rendered in Italian and, given the syntax of this language, the authors provided female and male alternatives for nouns, adjectives, and articles in order to ensure gender neutrality[1]. For example, the original American names were replaced by more common Italian equivalents to facilitate the respondents' identification with the protagonists of the scenarios (e.g. Karen/Katia; Richard/Riccardo).

In some rare cases, we had to adapt the content of the scenarios to the Italian context. For instance, in the Karen/Katia scenario, the 'first test', was best rendered with 'prova precorso', which is a midterm, often non-mandatory, test. In addition, the two results of the tests (i.e. A and B) were replaced with 'highest score' and 'lower score', given the difficulty of translating them into the Italian 30-point scale grading system. Lastly, in the case of the Morgan/Andrea scenario, a section relating to medical insurance coverage was deleted since the Italian national health system covers cancer treatment.

Participants

The sample involved 683 university students from the University of Naples Federico II in the south of Italy. The respondents had an average age of 22.63 (SD = 2.827), with 62% identifying themselves as females and 38.8% as males. Participants were recruited through convenience cluster sampling, with a balanced distribution of subjects from across the following faculties: Psychology (18.4%), Law (15.4), Biology (14.3%), Politics (15.2%),

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[1] Male and female Italian nouns and adjectives require different final vowels and definite/indefinite articles.

Engineering (15.7%), Medicine (14.8), and other (6.1%). 73.6% of the total sample was enrolled on a Bachelor's degree and 26% on a Master's degree.

Procedures

Participants were recruited across the university campus, particularly in areas regularly frequented by university students, such as study rooms, and university halls and hubs. Two researchers and a trained supervised undergraduate student invited the participants to fill out a paper-and-pencil questionnaire and return it with signed authorisation for use of all the data provided, including sensitive information. Only an overview of the research scope was provided, in order not to influence the respondents' answers.

Participants were not offered any remuneration for returning the questionnaire. However, they were promised feedback and research results following completion of the analyses as a means to increase their compliance with the study.

Analytical Instruments

All the statistical analyses were conducted using Mplus 7.0, except for descriptive statistics, which were carried out by means of IBM SPSS v. 22.

Data Analyses and Results

The researchers took a number of statistical steps to assess the structural validity and reliability of the MMO-2. The first phase followed the approach used by Giammarco (2014), who ran a series of exploratory factor analyses using principal axis factoring (PAF) with oblique rotation. Giammarco's results suggest analysing the MMO-2 structure first at the scenario level. This means extracting a factor for Justice and a factor for Care from each scenario and conceptualising them as parallel forms. Based on these findings, we first used Exploratory Structural Equation Modelling (ESEM) to extract a Care and Justice latent

variable from each scenario (Model 1). Subsequently, we put together the manifest and latent variables retained from Model 1 and analysed them through a second ESEM (Model 2).

Given the categorical nature of the item responses to the MMO-2, all the analyses conducted in this study are based on a robust version of Weighted Least Square (WLSMV) estimator. Being less than 5%, missing data were treated with pairwise deletion as implemented by WLSMV (Asparouhov & Muthén, 2010).

With regard to the goodness of fit indices, we referred to the Chi-Square test (χ^2), Root Mean Square Error of Approximation (RMSEA), Tucker-Lewis Index (TLI), Bentler's Comparative Fit Index (CFI) (for a general review see Hooper, Coughlan, & Mullen, 2008). According to Hu and Bentler (1999), a cut-off value of .06 or below is suggested for RMSEA, with confidence interval values close to 0 for the lower limit and less than .08 for the upper limit. Regarding CFI and TLI, values above .95 are generally recognised as indicative of good fit.

In terms of construct validity, all previous versions of the MMO have been tested through Campbell and Fiske's Multitrait-Multimethod Matrix (1959) (see Liddell & Davis, 1996; Liddell, Halpin, & Halpin, 1993). However, this method has received criticism for lacking clear cut-off points to assess the magnitude of the correlations within the MTMM matrix (Ferketich, Figueredo, & Knapp, 1991). Therefore, we relied on Fornell and Larcker's method (1981), which is another widely used set of criteria for assessing psychometric validity. According to this method, convergent validity can be established when Average Variance Extracted (AVE) reaches a value higher than .5. In order to assess discriminant validity, AVE should also be higher than both Maximum Shared Variance (MSV) and Average Shared Variance (ASV) (Hair, Anderson, & Black, 2016; Fornell & Larcker, 1981).

With regard to the MMO-2 reliability, we decided not to use Cronbach's alpha – which is often used for assessing the reliability of psychometric instruments – due to its

tendency to overestimate reliability in cases like the Italian MMO-2, where the condition of tau-equivalence (i.e. equal factor loading) cannot be met (Raykov, 1997). Therefore, we relied on Fornell and Larcker's Composite Reliability (CR) (1981) to get a more accurate estimate of the reliability of the Italian MMO-2. Similar to Cronbach's alpha, a good level of reliability is established when CR reaches levels above .7.

Model 1: Single-Model ESEM Construct Validity

Exploratory Structural Equation Modelling (ESEM) is a recently developed statistical technique that combines the features of Exploratory Factor Analysis (EFA) with those of Confirmatory Factor Analysis (CFA) (Asparouhov & Muthen, 2009). One of the advantages of ESEM is that, although the researcher can specify a set number of factors to extract, as in CFA, the factors can be rotated and for manifest variables can cross-load, like in EFA.

Therefore, this technique allows more modelling flexibility compared to the strict requirement of zero cross-loadings in CFA, which often leads to extensive model modification to find a well-fitting model (Asparouhov & Muthen, 2009, p. 2). However, even in ESEM, cross-loadings are still expected to be as close to zero as possible.

Based on these premises, we decided to use ESEM with geomin rotation, as implemented in Mplus 7.0, to test the construct validity of the Italian MMO-2. As touched upon, the following pages will showcase the results of the single-models ESEM, through which we extracted a Care and Justice factor from each scenario (Model 1). As we can see in Table 1, all the models had to be re-specified to achieve satisfactory model fit. The next paragraph will show in detail the necessary changes we had to make. In particular, a consistent number of items and two entire scenarios had to be deleted, and several cross-loadings had to be acknowledged.

Deleted Manifest Variables

Based on the results of ESEM, in Model 1 the following manifest variables were deleted due to a low R^2: item1 (.267), item3 (.274), item5 (.150), item6 (.176), item13 (.290), item15 (.287), item16 (.104), item21 (.084), item25 (.263), item28 (.122), item29 (.045), item33 (.025), item37 (.200), item48 (.206), and item49 (.034) (see also Appendix A). This choice was driven not only by a statistical rationale. With regard to the instrument's face validity, many of the above items proved of difficult interpretation. Indeed, the participants' oral feedback showed difficulty in answering item16 "*This is a matter of conflicting rights: Morgan's parents have a right to know, but Morgan also has a right not to tell them*", item28 "*Karen's reputation with her classmates and faculty is in jeopardy here*", and item29 "*This is really about conflicting rights: Karen and the professor's right to do what they want, and the rights of the other students in the class to not be disadvantaged*". In fact, all of them similarly describe a matter-of-fact situation, with respect to which participants are not sufficiently prompted to take a given moral position.

Deleted Latent Variables

The results obtained in Model 1 also suggested the deletion of two pairs of related factors, namely Care1/Justice1 and Care4/Justice4. The former refers to the 'Student Club' vignette whereas the latter to the 'Karen' vignette. Regarding the 'Student Club' scenario, the deletion of four items due to a low R^2 left only item2 to load on the Justice1 Factor. Since there can be no latent variable with only one manifest variable, it was necessary to delete the whole scenario. The deletion of this vignette can also be justified on cultural grounds: university student clubs are not as popular in Italy as they are in the United States, and therefore Italian respondents might not relate well to the proposed scenario.

A different condition was found for Care4/Justice4. In this case, after deleting the manifest variables with low inter-item reliability there were still sufficient parameter estimates to load onto the two factors extracted. However, the resulting model fit was inadequate to hold the

null hypothesis that the sample covariance matrix would equal the population covariance matrix. In particular, the Chi-Square test of model fit was too high and significant, and the RMSEA was well above most accepted values for accepting the model (see Table 1).

Cross-loadings

As a form of exploratory factor analysis, ESEM is designed to allow manifest variables to load onto every latent variable. Therefore, it is not uncommon in ESEM to acknowledge the presence of non-zero cross-loadings (Morin, Marsh, & Nagergast, 2013).

In Model 1, item8 was originally intended to load only on the Justice2 Factor; however, this item also loads negatively on the Care Factor ($\lambda = -.396$). We believe this cross-loading relates to the inherent conflictual nature between claiming the right to get the work published (Justice) and the lack of concern for the consequence that the roommate faces (Care). In this light, the two options are negatively related.

Similarly, item18 was designed to load only on the Care3 Factor. However, ESEM shows that this item also loads negatively on Justice3 ($\lambda = -.396$). The reason for this is that item18 describes a condition in which respecting Morgan/Andrea's decisions (Care) is at issue with the right of the parents to know the truth (Justice). However, these two manifest variables could not be deleted without undermining the factor structure of their corresponding latent variable, therefore they were retained whilst being aware of the cross-loading.

Despite showing a satisfactory R^2 value (.39), item51 cross-loads with the Care7 Factor ($\lambda = .289$). It might be noted that item8 and item18 likewise presented a similar condition. Despite this being true, their deletion would have entailed deleting the whole scenario, due to the absence of at least one other congeneric variable for their corresponding factor. This is not the case for item51, which can be replaced by item46, item47, and item52. Therefore, this variable was excluded from future analyses.

Model 2: Multiple-Model with all Items Included

Based on the results of the single-model ESEM at the scenario level (Model 1), we put together all the retained manifest variables of the MMO-2 into a multiple ESEM model. The overall model shows very close model fit (χ^2 = 155.05, Df = 143, p = .231, RMSEA = .011 (.000, .022), $p < .05$ = 1.000, CFI = .998, TLI = .996), suggesting no rejection of the null hypothesis that the model's implied variance-covariance matrix [$\Sigma(\theta)$] and the model's covariance matrix [Σ] are not statistically different. However, on closer inspection of the parameter estimates, it emerged that Care6 and Justice6 were not consistent with a two-factor structure, having all their manifest variables from item38 to item44 loading on one factor instead of two. This instance seems to stand in contrast with the results found in Model 1, in which a Justice/Care solution could well explain variations in the 'Richard/Riccardo' scenario. This anomaly can perhaps be explained by the fact that when this scenario is included in Model 2, it comes into conflict with the level of Care measured by all the other scenarios. In fact, consistent with Gilligan's theory (1982), the items composing the 'Richard/Riccardo' vignette pertain more to the pre-conventional stage, whereas the other scenarios measure Care between the conventional and post-conventional stage. A good example is represented by item38 '*I do not want to be the one to cause harm to Richard's relationship with Amy*'. In this instance, a high score on this item shows self-concern for being involved in Richard's and Amy's situation, rather than unselfish care for the future of their relationship.

Given these results, it was necessary to respecify the model by deleting the 'Richard/Riccardo' scenario. The final model so obtained showed highly acceptable indices for goodness of fit (χ^2 = 88.944, Df = 70, p = .062, RMSEA = .02 (.000, .031), $p < .05$ = 1.000, CFI = .995, TLI = .986), suggesting again an acceptance of the null hypothesis that the

model's implied variance-covariance matrix [$\Sigma(\theta)$] and the model's covariance matrix [Σ] are not statistically dissimilar. Therefore, the MMO-2 final model could be considered one of the possible models that were consistent with the data analysed.

In the final model (Mode 2), all factor loadings are higher than .3, which is the cut-off point suggested by Tabachnick and Fidell (2007) for retaining items in exploratory factor analysis. As we can see in Table 2, the values for Average Variance extracted and Composite Reliability are higher than their corresponding cut-off values only in three instances (i.e. Justice3, Justice5, and Care6). In all other cases, the value of CR and AVE indicate moderate/poor reliability and convergent validity. On the other hand, AVE is always higher than both MSV and ASV, showing satisfactory discriminant validity (see Table 3).

Table 3 also shows that inter-factor correlations range from a minimum of $\psi =.192$ (Care5 with Care6) and $\psi =.121$ (Justice3 with Justice5) to a maximum of $\psi = .338$ (Care3 with Care6) and $\psi = .269$ (Justice5 with Justice6). The highest intra-factor correlation was found between Justice2 and Care3 ($\psi = .39$), although few other lower correlations between Justice and Care Factors were significant at the 5% level.

These findings suggest that Justice and Care are best measured as two distinct and yet related constructs. To confirm this hypothesis, we tested our final 4-factor model against a series of alternative models. The first is a 2-factor unidimensional model, which ignores the items pertaining to specific vignettes, and uses only two general latent variables, one for Care and one for Justice. The second model is a multi-trait model, which in addition to the multidimensional 4-factor model, includes a general Care and Justice factor, which ignores the vignettes. The last model tests a similar multi-trait model differentiated by specifying a general Care and Justice factor for each vignette examined.

However, all of the proposed alternative models failed to describe the data better than the multidimensional 4-factor model. Therefore, we conclude that the latter is the most suitable model to use for the Italian adapted MMO-2 scale.

Discussion

As a result of the analyses conducted in this study, we suggest that the Italian-adapted version of the MMO-2 is best interpreted as a multidimensional instrument comprising four scenarios, namely 'Plagiarism', 'Morgan/Andrea', 'Administrator', and 'Parents'. Each scenario comprises two latent variables, one for Justice and one for Care, explaining in total 21 manifest variables (see Fig. 1). As mentioned in the introduction, the literature has acknowledged that context plays a strong role in determining ethical choices. In that regard, the MMO-2 multidimensional structure can be used to explain different aspects of the justice and care ethics in different contexts/scenarios that are relevant to people's lives, namely: care/justice in peer relationships (Plagiarism), care/justice in intimate relationships (Morgan/Andrea), care/justice in the workplace (Administrator), and care/ justice in family relationships (Parents). In using the Italian MMO-2, we advise that researchers and practitioners use one or a combination of scenarios that best align with their scopes and that best describe the context under investigation.

However, it is important to highlight that to achieve this final version, we had to make significant changes to the structure of the Italian MMO-2 scale. In fact, it was necessary to delete a consistent number of manifest variables and, in some cases, entire scenarios to achieve satisfactory model fit (see Table 1). With the exception of the 'student club' scenario, we cannot attribute these results to cultural causes that might have interfered with the adaptation of the instrument. Therefore, we must acknowledge that adjustments to the MMO-2 are necessary.

Despite appearing to be a drastic change to the proposed structure of the MMO-2, we would see the scale as a newly revised prototype of the MMO. In fact, the MMO-2 was originally conceived to be shorter than its previous version. Our study contributes to informing the developers of the MMO-2 to streamline the scale even further; this, rather than undermining its validity, will contribute to strengthening it.

Despite these changes, we must still be conscious that the final version of the Italian MMO-2 has further room for improvement. We recommend that future studies address issues such as the poor/moderate level of factor reliability and convergent validity of some Justice and Care factors (Table 2) as well the few significant low inter-factor correlations between latent variables pertaining to the same construct (Table 3). Although discriminant validity reached satisfactory levels, our findings suggest strengthening the general structure of the MMO-2. Moreover, it would be advisable to add at least one or more manifest variable to the factors that currently explain only two congeneric variables, namely Justice3 and Justice6. In addition, rephrasing or substituting item18, item20, item34 and item35 would rid the instrument of cross-loadings and further increase both reliability and convergent validity.

As one last note of caution, given the nature of our convenience sample, we recommend that future studies employ random sampling strategies to ensure a better generalizability of the results. In addition, we advise the use of cross validation samples to confirm the high number of post hoc adjustments we had to make to the initial proposed model.

Conclusions

This work constituted a good opportunity for testing the psychometric validity of the newly developed Measure of Moral Orientation second revision (MMO-2) while also introducing it to the Italian context. Since there is no similar instrument available in this

country, the study presented here can be of great use to Italian researchers and practitioners committed to understanding the relationship between the Ethics of Care and Justice.

At the same time, the results of our study provide some valuable suggestions for the future development of the MMO-2 in order to reach satisfactory levels of psychometric validity and reliability. We believe that with appropriate amendments and improvements, the MMO-2 can become a valuable instrument for the measurement of Justice and Care moral judgement at the HE level.

Beyond the psychometric findings presented here, this study aimed to stimulate more quantitative exploration into differences in moral orientation at the HE level from the perspective of the students as moral judges. In fact, research in moral issues has focused mainly on the general population, with very little understanding of how specific realms of Higher Education experience Care and Justice. This is unfortunate, since the exploration of morals in HE is of great topicality in today's contemporary global societies (Collier, 1993).

In support of this necessity, a study by Mumford et al. (2006) suggested that HE training should educate students on how to face moral issues, hence raising awareness about the consequences of their actions towards others. In that regard, the Italian scholarship has placed – at least theoretically – strong emphasis on the link between the ethics of care and the realm of pedagogy and education (Viafora, Zanotti, & Furlan, 2007).

However, given the dearth of research in this field, we believe it is necessary to investigate further how Justice and Care are experienced and practiced by college and university students over and above educators and teaching staff. The few enquiries into the Ethics of Justice and Care in HE have mainly focused on the experience of either teachers or researchers/practitioners as caregivers (Warin & Gannerud, 2014; Costley & Gibbs, 2006). Extremely little evidence is available on the experience of students as both caregivers and

care-receivers and even less quantitative data have been collected to shed light on these issues.

In light of this, our study has attempted to provide more knowledge on the use of quantitative instruments for measuring moral orientation at the HE level.

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