Profile of Personal Values for Health Sciences Students

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ABSTRACT

This study explores the personal values reported by Nursing, Physiotherapy and Social Work students and analyzes to what extent they fit the predictions made by the theory of intergenerational value change regarding the predominance of post-materialist values in younger generations. The participants stated their values in order of priority in an open-ended questionnaire. The sample was divided into three groups: A Nursing Students Group (NSG), made up of 150 participants; a Physiotherapy Students Group (PSG) represented by 150 participants, and a Social Work Students Group (SWSG) comprised of 150 participants. The results showed differences between the groups in the prioritized value categories and in each group’s resultant value profiles. The Physiotherapy and Social Work students’ values fitted the theory of value change predictions better, consequently giving post-materialist group profiles whilst the nursing students did not show results in line with the predictions, displaying an obviously materialist profile. Here, we discuss the results and their importance for the assessment of social change.

Key words: personal values, materialism, post-materialism, intergenerational change of values.


From a study carried out by the European group Values Survey in 1981, under the direction of Jon Kerkhofs and Ruud de Moor, The World Values Survey (WVS) emerged as a world-wide network of social scientists examining the values and beliefs of citizens in more than 80 countries, throughout every continent. Inglehart (1977) established the theory of intergenerational value change (or theory of cultural change) using the dichotomy of materialist/post-materialist values as the principal element to measure value change based on the hypothesis that economic and technological changes are transforming the values and motivations of people from advanced societies.

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Applying this theory in a Spanish context, it could be predicted that older Spanish
generations would mainly show materialist values (also called rational-secular values),
having faced difficult and demanding life conditions in a social climate of shortages,
in which work, effort and security were highly valued. On the other hand, the younger
generations, brought up in the contexts of prosperity and security would conform to a
personal scale of values in which post-materialist or self-expression values would prevail
-those related to personal development and autonomy, to harmony in human relationships,
to solidarity, tolerance, well-being and the search for life’s pleasures.

According to the theory of value change, this intergenerational change in personal
values is a gradual social change comparable to generational change in that post-materialist
values will end up becoming the values of reference as the older generations disappear.
In this regard, it came to be predicted (Abramson & Inglehart, 1995) that in Europe
in 2010, the post-materialist/materialist ratio would be 6/5 in the general population.

However, one of the most frequent criticisms of the cultural change theory is
related to its method of measuring values. Inglehart’s materialism/post-materialism
questionnaire has been the object of criticism with regards to the unidimensionality
of its scale and to the ordering (choice) of the assessed priorities in the sense that it
would oblige the individual to select two of four objectives, rejecting the other two,
thus compromising the individuals control and violating the principle of independent
measuring (for example Herz, 1979, Flanagan, 1982, 1987; Buerklin et al., 1994).

There are many other authors who have claimed that the way in which materialism
and post-materialism constructs are presented, from a bipolar confrontation perspective,
is not common in everyday settings (Braithwaite, Makkai, & Pittelkow, 1996; Brooks
& Manza, 1994) and as such, is not a natural evaluation of values. Finally, some recent
studies (Jiménez-López, Roales-Nieto, García-Vargas, Vallejo, Lorente, & Granados,
under review; Roales-Nieto, 2009; Roales-Nieto & Segura, 2010; Roales-Nieto, Preciado,
Malespin, Jiménez-López, & O’Neill, under review) have found that if categorization
as post-materialist or materialist is done from the report of personal values, the results
differ to those shown by studies based on the WVS, in which the definition of materialist/
post-materialist is realized in an indirect manner.

On the other hand, the majority of studies on generational value change have
been carried out from a sociological perspective, utilizing general population samples,
establishing that value change is a general phenomenon which affects all the population
in equal measure and whose key variable is age -the lower the age, the bigger the change. However, it has not been explored if certain sectors of the population could be more inclined to change than others, regardless of age. Health sciences and social
work and welfare professionals are people dedicated to professions which develop by
means of human relationships; jobs dedicated to others and with a high social content,
which demand altruistic, vocational and ethical personal values. That is to say, classically
modernist values which promote values beyond a view of life centered on one’s self.

Research regarding personal values in this type of professions can offer important
information for assessing the scope of Inglehart’s theory of cultural change predictions.
Indeed, some studies indicate that nursing professionals’ personal values only partially
fit the predictions made by Inglehart’s theory (e.g., Jiménez-López et al., under review).
The profession and studies of Social Work, even if not included in the area of Health Science, are very relevant to questions related to desirable and/or necessary values to perform said profession, which to a large extent shares those values typical of professions dedicated to health. For example, Gray (2010) recently pointed out that, “in the 1970s and 1980s there was an emphasis on the importance of moral philosophy for social work education and practice” citing a number of papers and books about these questions (i.e., Clark & Asquith, 1985; Goldstein, 1987; Ragg, 1977; Rhoda, 1986; Siporin, 1982, 1983, 1992; Timms, 1983). Goldstein (1987) established the so-called “neglected moral link” in social work practice, and according to Gray, 2010, “all social work encounters have a moral component in that they concern and affect the welfare of others”.

Personal values in social work professions have been studied more on a theoretic plane than on an empirical plane (i.e., Wilks, 2005; Gray, 2010; Banks, 2008). Few empirical studies have approached this subject. For example, Yeung, Ho, Lo, & Chan (2010) studied ethical personal values in social work and nursing students and found that the differences in professional (ethical) values between social work and nursing students are the result of a mix of personal, cultural, professional and organizational features. However, this relates to a study employing a qualitative methodology which did not explore the personal values themselves, but the taking of ethical decisions in theoretical situations. According to Wilks (2005) three traditional values of Social Work can be found which should a basic reference for a social work professional’s identity: (1) The values of social justice (BASW, 2002); (2) The principle of respect for persons; and (3) The concept of self-determination that rests upon a Northern European and American understanding of personal autonomy. There are many studies and theoretical analyses centered on the examination of how the experience of these professionals implies that the taking of decisions should be based on ethical references thus demanding them to have certain personal values which would shape the typical value profile of each profession (e.g., Armstrong, 2006; Bjorklund, 2004; Falcó, 2005; Lázaro & Hernández, 2010; Rubio, 2008; Woods, 1999; Zamorano, 2008).

This study covers various objectives related to personal values in Health Sciences and Social Work professions and analyzes their relationship with the change in values as predicted by the theory of social change. In first place, the personal values stated by participants will be analyzed in order to observe the differences or similarities in each group’s report of values. Secondly, value profiles will be created in line with the distinction made by the social change theory between materialist and post-materialist values to detect differences between the groups of participants.

**Methods**

*Design and participants*

An analytical-transversal study (Kelsey, Thompson & Evans, 1986) was followed, in which 463 people were discretionally selected from the students of nursing, physiotherapy
and social works schools (University of Almería, Spain). After eliminating surveys returned blank and those filled out incorrectly, 450 participants made up the final sample which was then divided into three groups: A Nursing Students Group (NSG) made up of 150 participants; a Physiotherapy Students Group (PSG) represented by 150 participants; a Social Work Students Group (SWSG) which comprised of 150 participants.

Instruments and measures

Values were assessed using the Report of Personal Values (RPV), which is a survey instrument with an open-ended question format where participants freely write up to a maximum of 10 values following an orderly and prioritized method (a detailed description of RPV can be found in Roales-Nieto, 2009, and Roales-Nieto & Segura, 2010). The RPV contains questions related to socio-demographic data and four open-ended questions about values (Sections A, B, C & D). In this study, we only used the questions that asked about the most important personal values (Section A).

In Section A, the participant read the following instructions before answering:

“Please write the PERSONAL VALUES that are driving your life. Please, do it BY RIGOROUS ORDER OF IMPORTANCE. You may write up to a maximum of 10. Think of the MOST IMPORTANT VALUES FOR YOU, those that you believe are driving your life and order them beginning with number 1 for the most important value and so on.”

The values reported by participants were categorized according to the criteria of Abramson and Inglehart (1995) and Inglehart and Welzel (2005) into: (a) post-materialist or self-expression values, a cluster of values that includes social tolerance, life satisfaction, expression and an aspiration to liberty and personal well-being; (b) materialist or secular-rational values, referring to personal and economic security. Values that did not meet the criteria for materialist or post-materialist were considered as (c) non-classifiable values. The Percentage Difference Index (PDI, Abramson & Inglehart, 1995; Miller, 1974) was calculated between post-materialist and materialist values. The PDI indicates the predominance of one type of response over another at a given point in time for a single variable (Miller, 1974). For each group and condition, PDI values were calculated subtracting the percentage of materialist values from the percentage of post-materialist values, yielding a measure that is equivalent to a mean score (Abramson & Inglehart, 1995, p.13). Resulting negative index values indicate a predominance of materialist profiles, while positive values indicate a preponderance of post-materialist profiles. The possible range of PDI values is between -100 and +100.

Procedure

Each participant was told that the obtained data would be treated in a way that scrupulously respected the confidentiality and the anonymity of the responses. Each participant was given a copy of the SPV and the instructions for completing it that included a statement about the anonymity of the responses, the confidential treatment of
data and an emphasis on providing the most honest responses possible. Each participant answered the survey individually and in the same order, beginning with questions related to socio-demographic data, followed by Section A. Participants were not able to return to a section that had already been answered. Once the survey was completed, participants put it in an envelope and sealed it. Surveys were collected during the years 2009-2012.

RESULTS

As can be seen in Table 1, the characteristics of the sample indicate fairly well-balanced groups across the majority of the socio-demographic variables.

The results produced three blocks of reported values, one for every group with a total of 1958 responses. The NSG provided a total of 716 responses ($M = 6.07; SD = 2.12$) in the form of personal values reported; the PSG a total of 638 ($M = 5.13; SD = 1.77$); and the SWSG 604 responses ($M = 5.08; SD = 1.81$).

The reported values were categorized according to functional similarity following the method of constructing a value lexicon (Bardi, Calogero, & Mullen, 2008). The values directly reported by the participants were grouped into value categories which gathered all equivalent terms given by the participants. Ambiguous terms or those with multiple meanings depending on context (polysemes) were eliminated to reduce lexical ambiguity. The process of response categorization produced 14 value categories; Table 2 shows the different types of values included in each category, with some examples of reported participant values ascribed to each one. The formation of categories was carried out independently by five expert researchers, using the criteria that there be at least 4 corresponding values to be accepted as a value category and to include the different responses in each category.

The direct reported values were also classified as materialist, post-materialist or non-classifiable values following the criteria of Abramson and Inglehart (1995), and Inglehart and Welzel (2005). Examples of post-materialist values were reports of values such as body worship, pleasure, entertainment, self-satisfaction, altruism, tolerance, self-esteem, solidarity, and the like. Examples of materialist values were reports of values like safety, order, authority, work, professionalism, money, morality, responsibility, and so on. Reports of family values and religious values were considered non-classifiable.

Table 1. Socio-demographic data reported.

<table>
<thead>
<tr>
<th></th>
<th>NSG $n=150$</th>
<th>PSG $n=150$</th>
<th>SWSG $n=150$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>19.30%</td>
<td>32.0%</td>
<td>30.00%</td>
</tr>
<tr>
<td>Women</td>
<td>75.30%</td>
<td>68.0%</td>
<td>69.30%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average (range)</td>
<td>23 (21-28)</td>
<td>22 (20-34)</td>
<td>23 (18-49)</td>
</tr>
<tr>
<td><strong>Economic status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium-low</td>
<td>6%</td>
<td>13.30%</td>
<td>8.60%</td>
</tr>
<tr>
<td>Medium</td>
<td>76.60%</td>
<td>65.30%</td>
<td>80.60%</td>
</tr>
<tr>
<td>Medium-high</td>
<td>17.30%</td>
<td>19.30%</td>
<td>4.60%</td>
</tr>
</tbody>
</table>
Table 3 presents the criteria used for generating each participant’s value profiles for personal values and values attributed to the participant’s own generation. The participants’ profiles were developed based on their report of materialist and post-materialist values (non-classifiable values were not considered). A post-materialist profile of values was defined as having reported a majority of post-materialist values. Likewise, a materialist profile of values was defined as having reported a majority of materialist values. Any other combination of values was defined as an undefined profile of values.

A statistical analysis by means of contingency tables with Pearson’s $\chi^2$ and standardized residual ($SR$ - a measure of the degree to which an observed chi-square cell frequency differs from the value that would be expected on the basis of the null hypothesis) indicate that there are neither significant differences between the reports on personal values nor the report of the different socio-demographic variables among the three groups of participants.

The results obtained from the reported personal values are shown in Table 4, which shows the percentage of participants who mentioned values belonging to the different categories in each group. The descriptive analysis of the results indicates various aspects of interest. Firstly, there are three value categories which clearly stand out as being predominant in all three groups, which are the categories of ethical, social relationship and family or familism values. These were all reported as being personal values by
over 50% of participants in every group. In addition, within these established value categories, a certain predominance of one of the studied professions can be observed in some of them. Nursing students have the highest frequency of reports in the value categories social relationships 90%, familism 72%, ethical 55.3%, health 52.6%, money 34%, job/professional 32%, hedonistic 19.3% and social order 17.3%. Physiotherapy students stand out in the affective 40.6% and well-being 19.3% value categories, whilst for Social Work students, the predominant value categories are individualism 39.3%, solidarity and tolerance 30.6% and universal values 18%.

On comparing the results of the different groups, significant differences were found in the report of various value categories. The statistical analysis indicates significant differences between the participating groups in different value categories. The NSG is the group which shows the highest score in social relationship, familism and health values ($p < 0.001$), and in money and job/professional values ($p < 0.05$). The SWSG shows the highest marks in solidarity values ($p < 0.05$), and for the PSG, the category of personal welfare values ($p < 0.05$) stands out. The statistics indicative of these significant differences between groups can be seen in Table 4, with the SR indicating the trend/direction of said differences as either lower or higher frequencies to those expected for each group. A graphical representation of these differences can be seen in Figure 1.

With the aim of being able to analyze the hypotheses from a theory of social change perspective, the value categories obtained were converted into one of the three value supra-categories or profiles (post-materialist, materialist and non-classifiable, see Table 5) according to the criteria of Abramson and Inglehart (1995) and Inglehart and Welzel (2005). The criteria to define the value profiles of each participant as a post-materialist profile, materialist profile or non-classifiable profile are detailed in Table 6.

The results obtained on applying these criteria can be seen in Figure 2, which shows the distribution of the value profiles for each group. The most common value profile in the three groups is non-classifiable. The percentage of participants with a post-materialist profile is under a third in all groups, with a slight majority in Physiotherapy

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**Table 4. Priority order of value categories for the report of personal values -Generational Profile of Personal Values (percentage of participants that mention some value of each category in these reports of personal values).**

<table>
<thead>
<tr>
<th>Category</th>
<th>NSG’s personal values ($N=150$)</th>
<th>PSG’s personal values ($N=150$)</th>
<th>SWSG’s personal values ($N=150$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Social relations</td>
<td>90.0%</td>
<td>78.0%</td>
<td>67.3%</td>
</tr>
<tr>
<td>2. Familism</td>
<td>72.0%</td>
<td>56.6%</td>
<td>52.0%</td>
</tr>
<tr>
<td>3. Ethic</td>
<td>55.3%</td>
<td>52.6%</td>
<td>49.3%</td>
</tr>
<tr>
<td>4. Health</td>
<td>52.6%</td>
<td>40.6%</td>
<td>39.3%</td>
</tr>
<tr>
<td>5. Affective</td>
<td>34.6%</td>
<td>36.6%</td>
<td>30.6%</td>
</tr>
<tr>
<td>6. Money</td>
<td>34.0%</td>
<td>36.0%</td>
<td>28.6%</td>
</tr>
<tr>
<td>7. Job/Professional</td>
<td>32.0%</td>
<td>24.6%</td>
<td>27.3%</td>
</tr>
<tr>
<td>8. Individualism</td>
<td>30.6%</td>
<td>22.6%</td>
<td>24.6%</td>
</tr>
<tr>
<td>9. Hedonism</td>
<td>19.3%</td>
<td>22.6%</td>
<td>19.3%</td>
</tr>
<tr>
<td>10. Solidarity</td>
<td>18.6%</td>
<td>22.6%</td>
<td>18.0%</td>
</tr>
<tr>
<td>11. Social order</td>
<td>17.3%</td>
<td>12.6%</td>
<td>16.6%</td>
</tr>
<tr>
<td>12. Universals</td>
<td>9.3%</td>
<td>12.0%</td>
<td>12.6%</td>
</tr>
<tr>
<td>13. Personal Welfare</td>
<td>8.0%</td>
<td>11.3%</td>
<td>10.6%</td>
</tr>
<tr>
<td>14. Religion</td>
<td>3.3%</td>
<td>1.3%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>
Figure 1. Graphical representation of the value profiles showed by the three groups, indicating the statistically significant differences in the report of values. (Notes: *** = p < 0.001; ** = p < 0.01; *= p < 0.05)

Table 5. Statistical results of the contrast between the three groups and the reported value categories

<table>
<thead>
<tr>
<th>Value Categories</th>
<th>$\chi^2$</th>
<th>$p$</th>
<th>NSG</th>
<th>PSG</th>
<th>SWSG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social relation</td>
<td>22.815</td>
<td>.000</td>
<td>+4.2</td>
<td>-4.1</td>
<td></td>
</tr>
<tr>
<td>Familism</td>
<td>16.633</td>
<td>.000</td>
<td>+3.9</td>
<td>-3.1</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>25.127</td>
<td>.000</td>
<td>+4.5</td>
<td>-4.1</td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td>7.220</td>
<td>.027</td>
<td>+2.6</td>
<td>-2.0</td>
<td></td>
</tr>
<tr>
<td>Job/professional</td>
<td>6.614</td>
<td>.037</td>
<td>-2.5</td>
<td>+2.3</td>
<td></td>
</tr>
<tr>
<td>Solidarity/tolerance</td>
<td>6.140</td>
<td>.046</td>
<td></td>
<td></td>
<td>+2.3</td>
</tr>
<tr>
<td>Personal Welfare</td>
<td>9.522</td>
<td>.009</td>
<td>-2.1</td>
<td>+3.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Value categories ascribed to the materialism/postmaterialism dichotomy.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Ascribed value categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materialist values</td>
<td>Ethical values</td>
</tr>
<tr>
<td></td>
<td>Job/professional values</td>
</tr>
<tr>
<td></td>
<td>Social stability/order values</td>
</tr>
<tr>
<td></td>
<td>Individualism values</td>
</tr>
<tr>
<td></td>
<td>Money values</td>
</tr>
<tr>
<td></td>
<td>Post-materialist values</td>
</tr>
<tr>
<td></td>
<td>Hedonistic values</td>
</tr>
<tr>
<td></td>
<td>Affective values</td>
</tr>
<tr>
<td></td>
<td>Solidarity values</td>
</tr>
<tr>
<td></td>
<td>Personal welfare values</td>
</tr>
<tr>
<td></td>
<td>Universal values</td>
</tr>
<tr>
<td></td>
<td>Social relationship values</td>
</tr>
<tr>
<td></td>
<td>Familism values</td>
</tr>
<tr>
<td></td>
<td>Religious values</td>
</tr>
<tr>
<td></td>
<td>Health values</td>
</tr>
</tbody>
</table>

Figure 2. Percentages of participants showing each profile in each group.
and Social Work students. In relation to the percentage of participants in each group who showed a materialist profile in each group, the same difference can be seen but inverted.

A traditional way of quantitatively comparing predominance of post-materialist and materialist values is by the use of a Percentage Difference Index (PDI) calculation (Abramson & Inglehart, 1995), a measurement which indicates the predominance of one type of result in relation to another. Figure 3 shows the results of the PDI calculation for the three groups of participants, finding a predominance of materialist values only in the NSG (PDI -8.7), whilst SWSG (PDI +5.3) and PSG (PDI +12) show a predominance of post-materialist values.

![Figure 3: PDI for the three groups of participants.](image)

**DISCUSSION**

The study explores the personal values reported by students of social work and health sciences, with the objective of assessing to what extent they fit the predictions of the theory of value change and to determine any similarities and/or differences in the value profiles showed by the three groups. The theory of value change predicts that the younger generations would show a predominance of post-materialist values rather than the materialist values characteristic of the older generations.

The health sciences and social work professions are primarily developed through human relationships; they are dedicated to others, something which demands ethical, altruistic and vocational values. One of the objectives of this study is to assess the scope of the value change in students of these professions, with the aim of determining the scope of the cultural change as predicted by the theory of social change.

First, the personal values reported by the participants were analyzed in order to examine any similarities or differences between the groups. The results indicated that, despite the three groups showing similarities in terms of placing the most importance on the value categories of social relationships, familism and ethical values, there were also significant differences found between the groups. The Nursing Students Group showed the highest frequency of social relations and familism values. There were also
other differences regarding health, job/professional and money values found between groups, which were also the most frequent for students of Nursing.

In relation to each group’s resulting value profile, the profile unclassifiable was the most common. This is an important piece of information to take into consideration, instead of only focusing on the materialist/post-materialist dimension, as the materialist and post-materialist profiles together present a total frequency similar to that of the unclassifiable profile. However, there were also differences between the groups regarding materialist and post-materialist profiles. Social Work and Physiotherapy students showed a post-materialist profile, whilst Nursing students showed a materialist profile. If these results are interpreted in relation to the theory of intergenerational change of values, this would mean that the predictions regarding the shift of values in younger generations were fulfilled only by the Physiotherapy and Social Work student groups. The fact that the Nursing students show a clearly materialist profile contradicts the theory and confirms the findings of previous studies (Jiménez-López, Roales-Nieto, García Vargas, Vallejo, Lorente, & Granados, under review; Roales-Nieto, 2009; Roales-Nieto & Segura, 2010; Roales-Nieto, Preciado, Malespin, Jiménez-López, & O’Neill, under review) which have indicated the possibility that the change in values between generations may not be as uniform as the authors of the theory have claimed (e.g., Abramson & Inglehart, 1995; Inglehart, 1970, 1971, 1977, 1990, 1997).

The discrepancy in this study’s results could be due to both the different method of measuring the values (in that the report of personal values was not conditioned to predetermined values and was not really affected by social desirability bias) and the use of specific population groups, which allowed a detailed analysis to be carried out to determine if the change in values has taken place in equal measure between all the social subgroups and groups. Whilst we should take into account the need for these results to be replicated with a larger sample of participants and the fact that these results need to be considered prudently, this study confirms the possibility that intergenerational social change theory should be reviewed.

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