Socio-Psychological Differences of General Practitioners and Internal Medicine Doctors in Greece

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ABSTRACT

Objective: To compare perceptions of their specialty between general practitioners and internists. Setting: Participants 102 specializing doctors (residents), 52 in General Practice (GP) and 50 in Internal Medicine (IM).
Measures: Others as Shamer scale, Experience of Shame Scale (ESS; Andrews et al., 2002) and Symptom Check List 90 (SCL-90-R) (Derogatis, 1983) was used to collect the data. Results: General practitioners were more likely to consider their specialty as the most underestimated (78% vs 56%, odds ratio 9.65 (95% CI 2.99 to 31.19), p < .001) while Internist’s were more likely to consider their specialty as the most difficult (72% vs 19%, odds ratio 10.8 (95% CI 4.28 to 27.25), p < .001). Outer shame score is positively related with the conception that the participant’s specialty is the most underestimated and with the perception that the participants should have chosen another specialty. On the other hand, inner shame score is negatively related to the conception that a participant’s specialty is the most underestimated while the obsessive – compulsive scale score (SCL – 90) is negatively related to a participants perception that his/her specialty is the most underestimated. Conclusions: The majority of Greek General Practitioners experience significantly higher shame scores and significantly lower anxiety scores than Internal Medicine Doctors while they feel that they do not receive the same social recognition as Internists.

Keywords: Shame, General Practitioners, Prime Health Care, Psychology, Personality.
Κοινωνικο-Ψυχολογικές διαφορές Γενικών Ιατρών και Παθολόγων στην Ελλάδα

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ΠΕΡΙΛΗΨΗ

Σκοπός: Να συγκριθούν οι αντιλήψεις των Ελλήνων ειδικευμένων Γενικών Ιατρών και των ειδικευμένων Παθολόγων, σχετικά με τις ειδικότητές τους. Δέντρα: Ελληνικά ειδικευμένοι ιατροί, 52 ειδικευμένοι Γενικής Ιατρικής και 50 ειδικευμένοι Παθολόγιας. Μέθοδος: Οι σταθμισμένες παθοψυχολογικές κλίμακες Others as Shamer scale, Experience of Shame Scale (ESS; Andrews et al., 2002) και Symptom Check List 90 (SCL-90-R) (Derogatis, 1983) χρησιμοποιήθηκαν για την εξαγωγή των αποτελεσμάτων της έρευνας. Αποτελέσματα: Οι Γενικοί Ιατροί θεωρούν την ειδικότητά τους πιο υποτιμημένη (78% vs 56%, OR 9.65 (95% CI 2.99 to 31.19), p < .001) ενώ οι Παθολόγοι τείνουν να θεωρούν την ειδικότητά τους ως την πιο δύσκολη (72% vs 19%, OR 10.8 (95% CI 4.28 to 27.25), p < .001). Το επίπεδο της εξωτερικής ντροπής (outer shame score) σχετίζεται θετικά με την αντίληψη ότι η ειδικότητά κάποιου εκ των συμμετέχοντων είναι πιο υποτιμημένη και με την αντίληψη ότι θα έπρεπε κάποιος να επιλέξει μια άλλη ειδικότητα. Από την άλλη μεριά, το επίπεδο της εσωτερικής ντροπής (inner shame score) εμφανίζεται να σχετίζεται αρνητικά με την αντίληψη ότι η ειδικότητά των συμμετεχόντων είναι πιο υποτιμημένη. Επιπλέον, το επίπεδο του ψυχαναγκασμού (obsessive – compulsive scale score, SCL – 90) σχετίζεται και αυτό αρνητικά με την αντίληψη των συμμετεχόντων ότι οι εικότητές τους είναι πιο υποτιμημένες. Συμπεράσματα: Η πλειοψηφία των Ελλήνων ειδικευμένων Γενικών Ιατρών βίωσε σημαντικά υπηρέτηρη ντροπή και σημαντικά μικρότερο ποσοστό άγχους σε σχέση με τους συναδέλφους τους Παθολόγους. Ακόμα οι Γενικοί Ιατροί αισθάνονται ότι δεν λαμβάνουν τον ίδιο βαθμό κοινωνικής αναγνώρισης σε σχέση με τους Παθολόγους της παρούσας έρευνας.

Λέξεις κλειδιά: Ντροπή, Γενικοί Ιατροί, Πρωτοβάθμια Φροντίδα Υγείας, Ψυχολογία, Προσωπικότητα

ΕΙΣΑΓΩΓΗ

The continuous propagation of the medical specialty of Family Medicine in Greece during the last 20 years and the constantly increasing number of young doctors entering this area led to the unavoidable “cohabitation” of General Practitioners with Internal Medicine specialists, especially in the various Primary Health Care units located in various parts of the country. The scarcity of General Practitioners in Greece, during the past decades, led many Internal Medicine specialists to staff the Primary Health Units of the country. Having a distinct scientific role but also sharing common fields of medical action these two specialties have to co-exist in the new reality that is being developed in the Primary Care of Greece. In the present article we conducted a comparison of the two groups. In particular the aim of this study was to clarify the perception that general practitioners (GP’s) have of their profession, to compare the corresponding beliefs of Internal Medicine doctors and to investigate their differences regarding various psychological characteristics.
METHOD
Participants and study design.
Participants were 102 specializing doctors (residents), 52 in General Practice (GP) and 50 in Internal Medicine (IM), 45 men and 57 women aged 29 to 42 years (men: Mean= 33.9, SD 2.78; women: Mean= 34.1, SD 2.76, NS), working in hospitals of Central Macedonia.

The data collection was carried out between February and May 2011. The questionnaires were answered anonymously from the physicians that were recruited to take part into this research. 120 questionnaires were initially distributed and 102 were returned completed.

Instruments and measures
A socio-demographic questionnaire was used in order to record gender, family status and place of living. Furthermore, the respondents answered a set of questions about how they perceive the relative position of their specialty in the medical field in terms of difficulty and prestige, and whether they consider that their specialty has the recognition it deserves. The participants were also asked to state if they regretted their choice of specialty and finally they were asked about their ability to recall a stressful event of their childhood and adulthood. Three more bi-valued variables (True, False) were afterward created and completed according to whether the respondents consider their specialty as the most difficult and prestigious or underestimated (feeling of injustice).

Further, the following instruments were used:
Others as Shamer (OAS; Goss et al., 1994). This 18 items scale measures external shame (global judgements of how people think that others view them). Respondents rate on a 5-point Likert scale (0–4) the frequency of their feelings and experiences in items such as ‘I feel other people see me as not quite good enough’ and ‘I think that other people look down on me’. Higher scores on this scale reveal high external shame. The Greek version of OAS questionnaire - has been validated by Gouva et al. and found to have a high internal consistency (Cronbach’s α = 0.846).
Experience of Shame Scale (ESS; Andrews et al., 2002). ESS is a 25-item scale assessing feelings of shame around three key domains of self: character (personal habits, manner with others, what sort of person you are and personal ability), behaviour (shame about doing something wrong, saying something stupid and failure in competitive situations) and body (feeling ashamed of one’s body or parts of it). Each item indicates the frequency of experiencing, thinking and avoiding any of the three areas of shame in the past year and is rated on a 4-point Likert scale (1–4). The Greek version of ESS questionnaire have been translated and validated into Greek by members of the research team (Gouva et al., 2013). In the present study, ESS total score showed an excellent internal consistency (Cronbach’s α = 0.948).
Symptom Check List 90 (SCL-90-R) (Derogatis, 1983). The SCL-90-R was used to assess mental well-being. This widely used screening tool, which can be used for screening against putative cases of psychiatric/psychological illness, contains 90 items with a 5-point scale (0 = not at all, 4 = extremely), and assesses symptomatology in nine areas (Somatization - SM, Obsessive-Compulsive - OC, Interpersonal Sensitivity - IS, Depression - DE, Anxiety - AN, Aggression - AG, Phobia - PH, Paranoid Ideation - PI, Psychoticism - PS). The average score of all 90 items yields the global severity index (GSI), which represents the overall level of distress. GSI t scores ≥63 identify cases with possible mental disorder (SCL cases) (Derogatis, 1983; Jacobson et al., 1997; de Groot et al., 1999; Schmitz et al., 2000; Bulow et al., 2002; Beutel et al., 2005). In addition, the Positive Symptom Distress Index (PSDI) is calculated which indicates the intensity of distress. Higher scores on the scales of the SCL-90-R indicate higher distress; it should be noted that individual scales cannot be interpreted in diagnostic categories.

Statistical analysis
All data were analysed using predictive analytics software (SPSS), version 18 (SPSS Inc., Chicago, IL, USA). The OAS, ESS – 25 and SCL-90-R were scored and analysed according to the published guidelines using appropriate compute and transform commands on spss application.

The chi-square test of independence was performed to examine the relation between pairs of nominal or ordinal variables whereas Fisher exact test was applied when the necessary assumptions for chi square was not met (expected counts less than 5).

Independent samples t test were conducted to explore whether there are differences between the groups defined by specialty or gender for all scales that were computed from our data. Levene test was used to test whether equality of variances is assumed in every replication of the method and when the equality of variances was not possible to be assumed the Welch’s t test was applied. A two sided level of significance was set at 0.05 for all statistical tests.

The logistic regression procedure (forward stepwise conditional method) was applied in order to determine associations between perceptions of the participants for their specialty and various nominal and scale variables that were encountered in this study. Overall sensitivity, specificity and Cox & Snell and Nagelkerke R² are reported for each replication of the method. Further, the receiver operating characteristic (ROC) curve is provided as a measure of goodness-of-fit of the computed logistic regression model, a curve that evaluates the fit of a model based on the simultaneous measure of sensitivity (True positive) and specificity (True negative) for all possible cutoff points.

RESULTS
45 participants of the study were male and 57 were female. Mean age was 34 years (male: 33.9, female: 34 , range 29 – 42). Gender has a non-significant effect in the proportion of participants that regret their choice of specialty χ² (1, N = 102) = 0.57, p = .812, as well as in the proportion of the participants that consider their specialty as the most difficult χ² (1, N = 102) = 0.08, p = .777 The same applies to the proportion of the participants that consider their specialty as the most prestigious χ² (1, N = 102) = 1.315, p = .252, or the proportion of the participants that consider their specialty as the most underestimated χ² (1, N = 102) = 0.377, p = .539.
Thirty three physicians (32%) regret for their specialty, 46 consider their specialty as the most difficult (45%), 6 physicians (6%) consider their specialty as the most prestigious and 69 consider their specialty as the most underestimated (68%) (Table 1). Physicians that consider their specialty as the most difficult were less likely to believe that their specialty is the most prestigious ($\chi^2$ (1, $N = 102$) = 4.313, $p = .038$), while they was more likely to believe that their specialty is the most underestimated, $\chi^2$ (1, $N = 102$) = 0.226, $p = .635$.

Table 1: Crosstab of the participants’ perceptions about their specialty

<table>
<thead>
<tr>
<th></th>
<th>Most Prestigious</th>
<th>Most Underestimated</th>
<th>Regret for the specialty</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Most Difficult</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>50</td>
<td>6</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
<td>6</td>
<td>33</td>
<td>69</td>
</tr>
</tbody>
</table>

Inner shame score (ESS) was not significantly correlated to outer shame score (OAS) as well as to SCL – 90 subscales. On the contrary, outer shame was positively correlated to SCL – 90 sub-scales while the scores at the SCL – 90 sub-scales were highly positively correlated (Table 2).

Table 2: Pearson Correlations

<table>
<thead>
<tr>
<th>OAS</th>
<th>ESS</th>
<th>SM</th>
<th>OC</th>
<th>IS</th>
<th>DR</th>
<th>AN</th>
<th>AG</th>
<th>PH</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES</td>
<td>.153</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>.351(*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>.192</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>.456(*)</td>
<td>.643(*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>.172</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS</td>
<td>.572(*)</td>
<td>.715(*)</td>
<td>.790(*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>.436(*)</td>
<td>.807(*)</td>
<td>.823(*)</td>
<td>.803(*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>R</td>
<td>.118</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AN</td>
<td>.646(*)</td>
<td>.830(*)</td>
<td>.653(*)</td>
<td>.736(*)</td>
<td>.810(*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>.048</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>.782(*)</td>
<td>.666(*)</td>
<td>.718(*)</td>
<td>.781(*)</td>
<td>.824(*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH</td>
<td>.434(*)</td>
<td>.875(*)</td>
<td>.665(*)</td>
<td>.796(*)</td>
<td>.792(*)</td>
<td>.860(*)</td>
<td>.760(*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI</td>
<td>.491(*)</td>
<td>.661(*)</td>
<td>.635(*)</td>
<td>.771(*)</td>
<td>.688(*)</td>
<td>.659(*)</td>
<td>.705(*)</td>
<td>.646(**)</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>.353(*)</td>
<td>.648(*)</td>
<td>.683(*)</td>
<td>.816(*)</td>
<td>.765(*)</td>
<td>.756(*)</td>
<td>.679(*)</td>
<td>.744(**)</td>
<td>617(**)</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

General practitioners were found to have a significantly higher score in the inner shame (ESS) scale ($M_{GP} = 52.4$ vs $M_{IM} = 42.3$, $t (100) = 3.851$, $p < .001$, Figure 1). On the other hand, Internists had a significantly greater score on the anxiety (AN) scale and on the phobia (PH) scale ($M_{IM} = 5.6$ vs $M_{GP} = 3.3$, $t (69.7) = -2.195$, $p = .032$, Figure 2, and $M_{IM} = 3.3$ vs $M_{GP} = 1.5$, $t (58.6) = -2.104$, $p = .04$, Figure 3, respectively).
Table 3: Scales scores of the participants (Mean (SD))

<table>
<thead>
<tr>
<th></th>
<th>Total (N = 102)</th>
<th>GP (N = 52)</th>
<th>IM (N = 50)</th>
<th>Female (N = 57)</th>
<th>Male (N = 45)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>OAS</td>
<td>18.1 (8.2)</td>
<td>17.2 (7.1)</td>
<td>19.1 (9.2)</td>
<td></td>
<td></td>
<td>.259</td>
</tr>
<tr>
<td>ESS</td>
<td>47.5 (14.1)</td>
<td>52.4 (14.1)</td>
<td>42.3 (12.3)</td>
<td>&lt;.001</td>
<td>49.6 (14.4)</td>
<td>44.8 (13.5)</td>
</tr>
<tr>
<td>SM</td>
<td>6.7 (7.6)</td>
<td>5.6 (4.5)</td>
<td>7.8 (9.7)</td>
<td>.142</td>
<td>6.6 (6.8)</td>
<td>6.7 (8.5)</td>
</tr>
<tr>
<td>OC</td>
<td>8.6 (5.6)</td>
<td>9.5 (4.4)</td>
<td>7.6 (6.6)</td>
<td>.102</td>
<td>8 (5.3)</td>
<td>9.2 (6)</td>
</tr>
<tr>
<td>IS</td>
<td>6.2 (5.5)</td>
<td>6.7 (3.6)</td>
<td>5.7 (7)</td>
<td>.348</td>
<td>5.9 (4.4)</td>
<td>6.6 (6.7)</td>
</tr>
<tr>
<td>DR</td>
<td>7.7 (7)</td>
<td>8.2 (4.7)</td>
<td>7.2 (8.8)</td>
<td>.451</td>
<td>8.1 (6.7)</td>
<td>7.2 (7.4)</td>
</tr>
<tr>
<td>AN</td>
<td>4.4 (5.3)</td>
<td>3.3 (3.2)</td>
<td>5.6 (6.7)</td>
<td>.032</td>
<td>4.8 (4.8)</td>
<td>4 (5.9)</td>
</tr>
<tr>
<td>AG</td>
<td>2.9 (4.2)</td>
<td>2.4 (3.2)</td>
<td>3.4 (5)</td>
<td>.249</td>
<td>2.9 (3.7)</td>
<td>2.8 (4.7)</td>
</tr>
<tr>
<td>PH</td>
<td>2.4 (4.3)</td>
<td>1.5 (1.9)</td>
<td>3.3 (5.8)</td>
<td>.040</td>
<td>2.1 (3.2)</td>
<td>2.7 (5.5)</td>
</tr>
<tr>
<td>PI</td>
<td>4.4 (4.1)</td>
<td>4.7 (3.6)</td>
<td>4.1 (4.6)</td>
<td>.464</td>
<td>4.2 (3.8)</td>
<td>4.6 (4.4)</td>
</tr>
<tr>
<td>PS</td>
<td>4 (3.9)</td>
<td>4.2 (3)</td>
<td>3.9 (4.7)</td>
<td>.670</td>
<td>4 (3.6)</td>
<td>4.2 (4.3)</td>
</tr>
</tbody>
</table>

Factors associated with respondents' perceptions

First, the perception of the most underestimated specialty was set as the dependent variable in the logistic regression model and the stepwise procedure terminated after 4 steps. The respondent's specialty along with the outer shame, inner shame and the obsessive – compulsive scale score were statistically significant explanatory variables. The overall prediction power of the induced logistic model was 78.4% (sensitivity = 91.3%, specificity = 51.5%, Cox & Snell $R^2 = 0.235$, Nagelkerke $R^2 = 0.328$), while the area under the ROC curve was 0.815 (95% CI 0.733 to .876) (Figure 4). The corresponding logistic model with the perception of the most difficult specialty as the dependent variable was terminated after 1 step, specialty was the unique statistically significant explanatory variable and the overall prediction power of the induced logistic model was 76.5% (sensitivity = 78.3%, specificity = 75%, Cox & Snell $R^2 = 0.256$, Nagelkerke $R^2 = 0.343$), while the area under the ROC curve was 0.766 (95% CI 0.671 to .862) (Figure 5).

When, the respondent's perception that he/she should not have chosen his specialty (regret about his/her choice) was set as the dependent variable the logistic model was terminated after 1 step, outer shame score was the unique statistically significant explanatory variable and the overall prediction power of the induced logistic model was 68.6% (sensitivity = 9.1%, specificity = 97.1%, Cox & Snell $R^2 = 0.071$, Nagelkerke $R^2 = 0.1$), while the area under the ROC curve was 0.681 (95% CI 0.563 to .798) (Figure 6). The logistic model regarding the perception of the most prestigious specialty as the dependent variable did not show any independent variable to have a significant effect of this perception.

We found that General Practitioners were more likely to consider their specialty as the most underestimated (78% vs 56%, odds ratio 9.65 (95% CI 2.99 to 31.19), $p < .001$) while Internists were more likely to consider their specialty as the most difficult (72% vs 19%, odds ratio 10.8 (95% CI 4.28 to 27.25), $p < .001$). An increase of one unit in outer shame scale corresponds to an increase by 1.15 at the odd ratio of the subject's conception that his/her specialty is the most underestimated (95% CI 1.06 to 1.25, $p = .001$) as well an increase by 1.08 at the odd ratio of the subject's conception that he should have chosen another specialty (95% CI 1.02 to 1.14, $p = .009$). On the other hand, a unit increase at the score of inner shame corresponds to a decrease by 0.95 at the odd ratio of the subject's conception that his/her specialty is the most underestimated (95% CI 1.02 to 1.1, $p = .009$), while a unit increase of obsessive – compulsive scale (SCL – 90) implies a decrease by 0.85 at the odd ratio of the subject's conception that his/her specialty is the most underestimated (95% CI 0.76 to 0.95, $p = .005$).
Table 4: Summary of statistical dependencies provided by logistic models

<table>
<thead>
<tr>
<th>Factor</th>
<th>Perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regret</td>
</tr>
<tr>
<td>Specialty (GP vs IN)</td>
<td>ns</td>
</tr>
<tr>
<td>Outer Shame (OAS)</td>
<td>↑ 1.08 (^{(3)})</td>
</tr>
<tr>
<td>Inner Shame (ESS)</td>
<td>ns</td>
</tr>
<tr>
<td>Obsessive – Compulsive (SCL – 90)</td>
<td>ns</td>
</tr>
</tbody>
</table>

\(^{(1)}\): Internist are 10.8 times more likely to consider their specialty as the most difficult.  
\(^{(2)}\): General Practitioners are 9.7 times more likely to consider their specialty as the most underestimated.  
\(^{(3)}\): Change at the odd ratio (↑: increase, ↓: decrease) induced by an increase of one at the corresponding scale.

**DISCUSSION**

For most doctors, the selection of the medical profession represents the desire of a successful career. It is was demonstrated in many past studies that a not negligible number of doctors suffer from mental illnesses. It is a commonplace that the medical profession is subject to a high degree of psychological stress, which is associated with high expectations that the both the society as well as the doctors themselves have from their profession.

The recently introduced specialty of General Practice and its widespread dissemination within the Primary Health Units in Greece created a new reality. The “cohabitation” of GPs with Internists, the latter being widely recognized by the Greek society as “family doctors”, has created an interesting dynamic in the health care system—that is seeking to find an equilibrium point. That situation is unique in the sense that a similar phenomenon did not appear before, in other western countries, where the direction of health care development was opposite to the Greek paradigm (Gupta & Vohra, 2002).

A difference that was reported before is, that GPs have statistically lower average value in the scale of anxiety than Internists (Benedictow et al, 2005). This observation is verified in the present article, and a possible interpretation of this is the lower degree of exposure of GP’s to stressful hospital environments. Possibly the exposure of Internists to hospitalized patients creates an extra burden that has to be coped with. Another possible explanation of this observation might be that Internal Medicine specialty is chosen primarily by type A personalities comparing to General Practice which might be chosen by less anxiety-prone personalities. The latter hypothesis calls for further investigation.

Additionally, a British study (Cooper et al, 1989) found increased anxiety levels among male GPs working in the UK, which was significantly lower among their female GP colleagues. A similar phenomenon was not observed in our Greek sample and this can be attributed to the poor state kindergarten facilities for infants and toddlers in Greece. Returning to work after giving birth usually is interpreted in paying an expensive private kindergarten that might offer limited services, this being undoubtedly a stressful situation for young female Greek doctors.

Regarding total shame (ESS) GP’s show statistically higher mean than Internists. This fact supports the belief that the specialty of General Practice has not yet gained a clear distinctive role and the necessary recognition of the Greek society, factors that might be responsible for the production of these negative emotions and behaviors.

Moreover it was demonstrated that, regardless of specialty, the feeling of shame has a statistical dependence on the “injustice perception” of the respondents about their specialty. This finding places the specialty differentiation in a more realistic basis whereas poses the question of whether the total shame depends on psychological parameters such as self-esteem and others, that were not measured in this paper, thus raising questions for future research.

Additionally, the negative relation of the total shame and age is attributed to the fact that most probably a person when maturing has a more realistic perspective of his life and becomes more acceptable of himself.

Finally, in a recent study (Statthis., 2005), in a sample of 477 Greek doctors, it was demonstrated that doctors clearly prefer certain specialties to others. It was shown that the young doctors avoid specialties such as Family Medicine and Occupational Medicine, mainly because they are not considered adequately “scientific” (52% of responses) and because they do not provide a sufficient income (31% of responses). From this study it can be easily deduced that the system of medical specializations in Greece has to cope with serious structural problems which are even graver if one takes into consideration the long amount of time that young doctors have to wait before finding an available resident position in a Greek hospital. This reality and the pressing need of having an income of any kind usually forces young doctors to choose specialties with a shorter “waiting list” (General Practice being one of them) which are usually greatly different from their initial desires.
This conclusion is also supported by an older Greek study conducted among young medical students in Greece (Dardavesis et al, 1991) in which was also found that the long waiting list for some “prestigious” specialties, forces Greek young doctors to choose less “desirable” specialties, a fact that can be directly associated with their future disappointment that was clearly demonstrated in our present study.

APPENDIX

Figure 1: Error chart of the total inner shame between GP’s and Internists

Figure 2: Error chart of the anxiety between GP’s and Internists
Figure 3: Error chart of the phobia between GP's and Internists

Figure 4: ROC curve for the injustice feeling prediction
Figure 5: ROC curve for the most difficult specialty prediction

Figure 6: ROC curve for the regret about specialty prediction
BIBLIOGRAPHY


Sthathis G, Overpopulation and misdistribution of the medical force in Greece, doctors’ opinions, Publications Mediforce, Athens, 2005