Data Article

Data concerning the psychometric properties of the “Profile of Emotional Competence” questionnaire administered to a sample of athletes and non-athletes

Hajer Aouani a, Maamer Slimani b,⁎, Sabeur Hamrouni a, Nicola Luigi Bragazzi c,d, Mohamed Elloumi a

a High Institute of Sport and Physical Education of Ksar Said, Manouba University, Tunisia
b Research Laboratory “Sport Performance Optimization”, National Centre of Medicine and Science in Sport (CNMSS), El Menzah, Tunisia
c School of Public Health, Department of Health Sciences (DISSAL), Genoa University, Genoa, Italy
d Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health (DINOGMI), Section of Psychiatry, Genoa University, Genoa, Italy

A R T I C L E   I N F O

Article history:
Received 7 January 2018
Received in revised form 7 March 2018
Accepted 16 March 2018
Available online 22 March 2018

Keywords:
Questionnaire administration
Psychometric properties
“Profile of Emotional Competence” questionnaire
Emotional intelligence in athletes

A B S T R A C T

Emotional Intelligence (EI) can be defined as an “ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Salovey and Mayer, 1990) [1]. As such EI plays a major role in sport sciences. Studies conducted so far have shown contrasting findings. The paper contains data concerning the psychometric properties of the “Profile of Emotional Competence” questionnaire administered to a sample of 479 subjects (239 athletes, 240 non-athletes, age ranging from 12 to 18 years old, 239 men, and 240 women) in order: i) to explore EI between athletes and non-athletes students and ii) to examine differences in EI of young participants in terms of gender and age.

© 2018 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

⁎ Corresponding author.
E-mail address: maamer2011@hotmail.fr (M. Slimani).

https://doi.org/10.1016/j.dib.2018.03.067
2352-3409/© 2018 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).
Emotional Intelligence (EI) can be defined as an “ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” [1]. As such EI plays a major role in sport sciences. Studies conducted so far have shown contrasting findings. This paper contains data concerning the psychometric properties of the “Profile of Emotional Competence” (PEC) questionnaire, developed by Brasseur et al. in 2013 [2], here administered to a sample of 239 Tunisian athletes versus 240 non-athletes, in order to: i) explore EI between athletes and non-athletes students and ii) to examine differences in EI of young participants in terms of gender and age.

General descriptive characteristics of each item and of each sub-scale of the PEC questionnaire are reported in Tables 1 and 2, respectively. Reliability statistics (item-total correlation and Cronbach’s alpha coefficient in case of item exclusion) are shown in Table 3. Regression analyses for the sub-scales of the interpersonal and intrapersonal domains are shown in Tables 4 and 5, respectively, whereas regression findings for summary scores (global, interpersonal and intrapersonal domains) are reported in Table 6.
Table 1
Descriptive statistics of the “Profile of Emotional Competence” questionnaire.

| Item | Mean | Standard deviation | Skewness Statistics | Standard error | Kurtosis Statistics | Standard error |
|------|------|--------------------|---------------------|-----------------|---------------------|----------------|
| Item 1 | 3.157 | 1.596 | -0.202 | 0.112 | -1.514 | 0.223 |
| Item 2 | 3.152 | 1.622 | -0.201 | 0.112 | -1.558 | 0.223 |
| Item 3 | 2.992 | 1.692 | -0.060 | 0.112 | -1.692 | 0.223 |
| Item 4 | 3.856 | 1.387 | -0.984 | 0.112 | -0.372 | 0.223 |
| Item 5 | 3.253 | 1.565 | -0.286 | 0.112 | -1.448 | 0.223 |
| Item 6 | 4.090 | 1.378 | -1.295 | 0.112 | 0.196 | 0.223 |
| Item 7 | 3.933 | 1.384 | -1.044 | 0.112 | -0.290 | 0.223 |
| Item 8 | 3.365 | 1.519 | -0.371 | 0.112 | -1.332 | 0.223 |
| Item 9 | 3.207 | 1.585 | -0.235 | 0.112 | -1.493 | 0.223 |
| Item 10 | 3.221 | 1.606 | -0.233 | 0.112 | -1.531 | 0.223 |
| Item 11 | 3.653 | 1.345 | -0.677 | 0.112 | -0.704 | 0.223 |
| Item 12 | 3.393 | 1.594 | -0.413 | 0.112 | -1.443 | 0.223 |
| Item 13 | 3.798 | 1.341 | -0.698 | 0.112 | -0.891 | 0.223 |
| Item 14 | 3.547 | 1.388 | -0.586 | 0.112 | -0.948 | 0.223 |
| Item 15 | 3.349 | 1.621 | -0.289 | 0.112 | -1.571 | 0.223 |
| Item 16 | 3.631 | 1.448 | -0.712 | 0.112 | -0.888 | 0.223 |
| Item 17 | 3.420 | 1.612 | -0.436 | 0.112 | -1.433 | 0.223 |
| Item 18 | 3.188 | 1.590 | -0.226 | 0.112 | -1.498 | 0.223 |
| Item 19 | 3.850 | 1.387 | -1.052 | 0.112 | -0.213 | 0.223 |
| Item 20 | 3.238 | 1.633 | -0.269 | 0.112 | -1.549 | 0.223 |
| Item 21 | 3.505 | 1.578 | -0.547 | 0.112 | -1.282 | 0.223 |
| Item 22 | 3.902 | 1.374 | -1.037 | 0.112 | -0.213 | 0.223 |
| Item 23 | 3.814 | 1.312 | -0.776 | 0.112 | -0.674 | 0.223 |
| Item 24 | 3.547 | 1.458 | -0.697 | 0.112 | -0.880 | 0.223 |
| Item 25 | 2.975 | 1.620 | -0.001 | 0.112 | -1.600 | 0.223 |
| Item 26 | 3.198 | 1.609 | -0.228 | 0.112 | -1.525 | 0.223 |
| Item 27 | 3.347 | 1.595 | -0.371 | 0.112 | -1.448 | 0.223 |
| Item 28 | 3.163 | 1.610 | -0.212 | 0.112 | -1.534 | 0.223 |
| Item 29 | 3.079 | 1.564 | -0.129 | 0.112 | -1.484 | 0.223 |
| Item 30 | 3.495 | 1.479 | -0.592 | 0.112 | -1.055 | 0.223 |
| Item 31 | 3.384 | 1.568 | -0.427 | 0.112 | -1.364 | 0.223 |
| Item 32 | 3.668 | 1.488 | -0.792 | 0.112 | -0.833 | 0.223 |
| Item 33 | 3.679 | 1.458 | -0.746 | 0.112 | -0.873 | 0.223 |
| Item 34 | 3.061 | 1.551 | -0.108 | 0.112 | -1.472 | 0.223 |
| Item 35 | 3.572 | 1.301 | -0.531 | 0.112 | -0.785 | 0.223 |
| Item 36 | 3.188 | 1.584 | -0.216 | 0.112 | -1.493 | 0.223 |
| Item 37 | 3.054 | 1.578 | -0.077 | 0.112 | -1.527 | 0.223 |
| Item 38 | 3.336 | 1.546 | -0.369 | 0.112 | -1.367 | 0.223 |
| Item 39 | 3.457 | 1.509 | -0.473 | 0.112 | -1.253 | 0.223 |
| Item 40 | 2.912 | 1.559 | 0.030 | 0.112 | -1.509 | 0.223 |
| Item 41 | 3.672 | 1.449 | -0.828 | 0.112 | -0.669 | 0.223 |
| Item 42 | 3.374 | 1.555 | -0.397 | 0.112 | -1.355 | 0.223 |
| Item 43 | 3.138 | 1.605 | -0.162 | 0.112 | -1.550 | 0.223 |
| Item 44 | 3.150 | 1.557 | -0.162 | 0.112 | -1.480 | 0.223 |
| Item 45 | 4.006 | 1.334 | -1.179 | 0.112 | 0.091 | 0.223 |
| Item 46 | 3.000 | 1.613 | -0.048 | 0.112 | -1.586 | 0.223 |
| Item 47 | 3.520 | 1.497 | -0.523 | 0.112 | -1.217 | 0.223 |
| Item 48 | 3.804 | 1.298 | -0.830 | 0.112 | -0.400 | 0.223 |
| Item 49 | 3.253 | 1.562 | -0.283 | 0.112 | -1.437 | 0.223 |
| Item 50 | 3.714 | 1.482 | -0.851 | 0.112 | -0.738 | 0.223 |
Table 2
Descriptive statistics of each sub-scale of the “Profile of the Emotional Competence” questionnaire.

| Sub-scale                  | Mean   | Standard deviation | Skewness Statistics | Kurtosis Statistics |
|----------------------------|--------|--------------------|---------------------|--------------------|
| Identification interpersonal | 3.603  | 0.870              | -0.381 0.112        | -0.580 0.223       |
| Identification intrapersonal | 3.314  | 1.002              | -0.239 0.112        | -0.605 0.223       |
| Comprehension interpersonal | 3.173  | 1.013              | -0.154 0.112        | -0.820 0.223       |
| Comprehension intrapersonal | 3.369  | 0.953              | -0.092 0.112        | -0.922 0.223       |
| Expression interpersonal   | 3.474  | 0.993              | -0.220 0.112        | -0.837 0.223       |
| Expression intrapersonal   | 3.593  | 0.891              | -0.390 0.112        | -0.637 0.223       |
| Utilization interpersonal  | 3.567  | 0.870              | -0.287 0.112        | -0.755 0.223       |
| Utilization intrapersonal  | 3.471  | 0.901              | -0.336 0.112        | -0.392 0.223       |

Table 3
Item-total correlation and Cronbach’s alpha in case of item exclusion for the “Profile of Emotional Competence” questionnaire.

| Item | Item-total correlation | Cronbach’s alpha in case of item exclusion |
|------|------------------------|-------------------------------------------|
| Item 1 | 0.629                  | 0.927                                      |
| Item 2 | 0.660                  | 0.927                                      |
| Item 3 | 0.253                  | 0.930                                      |
| Item 4 | 0.155                  | 0.931                                      |
| Item 5 | 0.694                  | 0.927                                      |
| Item 6 | 0.333                  | 0.929                                      |
| Item 7 | 0.249                  | 0.930                                      |
| Item 8 | 0.346                  | 0.929                                      |
| Item 9 | 0.681                  | 0.927                                      |
| Item 10 | -0.352             | 0.935                                      |
| Item 11 | 0.159                 | 0.931                                      |
| Item 12 | 0.341                 | 0.929                                      |
| Item 13 | 0.353                 | 0.929                                      |
| Item 14 | 0.084                 | 0.931                                      |
| Item 15 | 0.245                 | 0.930                                      |
| Item 16 | 0.339                 | 0.929                                      |
| Item 17 | 0.359                 | 0.929                                      |
| Item 18 | 0.714                 | 0.926                                      |
| Item 19 | 0.312                 | 0.930                                      |
| Item 20 | 0.662                 | 0.927                                      |
| Item 21 | 0.337                 | 0.929                                      |
| Item 22 | 0.176                 | 0.931                                      |
| Item 23 | 0.319                 | 0.930                                      |
| Item 24 | 0.241                 | 0.930                                      |
| Item 25 | 0.696                 | 0.927                                      |
| Item 26 | 0.679                 | 0.927                                      |
| Item 27 | 0.684                 | 0.927                                      |
| Item 28 | 0.649                 | 0.927                                      |
| Item 29 | 0.680                 | 0.927                                      |
| Item 30 | 0.395                 | 0.929                                      |
| Item 31 | 0.667                 | 0.927                                      |
| Item 32 | 0.480                 | 0.928                                      |
| Item 33 | 0.428                 | 0.929                                      |
| Item 34 | 0.675                 | 0.927                                      |
| Item 35 | 0.317                 | 0.930                                      |
| Item 36 | 0.283                 | 0.930                                      |
| Item 37 | 0.676                 | 0.927                                      |
| Item 38 | 0.706                 | 0.927                                      |
| Item 39 | 0.097                 | 0.931                                      |
2. Experimental design, materials and methods

The protocol of the current study received ethical clearance by the Ethical Committee of the National Centre of Medicine and Science in Sports (CNMSS) of Tunisia before questionnaire

Table 3 (continued)

| Item | Item-total correlation | Cronbach's alpha in case of item exclusion |
|------|------------------------|------------------------------------------|
| Item 40 | 0.633 | 0.927 |
| Item 41 | 0.276 | 0.930 |
| Item 42 | 0.693 | 0.927 |
| Item 43 | 0.652 | 0.927 |
| Item 44 | 0.689 | 0.927 |
| Item 45 | 0.360 | 0.927 |
| Item 46 | 0.599 | 0.927 |
| Item 47 | 0.428 | 0.929 |
| Item 48 | 0.163 | 0.931 |
| Item 49 | 0.673 | 0.927 |
| Item 50 | 0.315 | 0.930 |

Table 4
Regression analyses for each sub-scale of the interpersonal domain of the “Profile of Emotional Competence” questionnaire.

| Source | Value | Standard error | T | Pr > | Lower bound (95%) | Upper bound (95%) | Value | Standard error | Lower bound (95%) | Upper bound (95%) |
|--------|-------|----------------|---|------|------------------|------------------|-------|----------------|------------------|------------------|
| Identification | Intercept: 3.038 | 0.071 | 42.624 | < 0.0001 | 2.898 | 3.178 | Athletes: 0.555 | 0.071 | 7.785 | < 0.0001 | 0.415 | 0.695 | Males: 0.024 | 0.071 | 0.331 | 0.741 | −0.116 | 0.164 | 0.014 | 0.041 | −0.067 | 0.094 |
| | 12–15 years: 0.550 | 0.071 | 7.712 | < 0.0001 | 0.410 | 0.690 | 0.316 | 0.041 | 0.236 | 0.397 |
| Comprehension | Intercept: 2.584 | 0.086 | 29.997 | < 0.0001 | 2.415 | 2.753 | Athletes: 0.644 | 0.086 | 7.476 | < 0.0001 | 0.475 | 0.813 | Males: 0.171 | 0.086 | 1.985 | 0.048 | 0.002 | 0.340 | 0.084 | 0.043 | 0.001 | 0.168 |
| | 12–15 years: 0.363 | 0.086 | 4.214 | < 0.0001 | 0.194 | 0.532 | 0.179 | 0.043 | 0.096 | 0.263 |
| Expression | Intercept: 2.523 | 0.086 | 29.298 | < 0.0001 | 2.354 | 2.692 | Athletes: 0.864 | 0.086 | 10.039 | < 0.0001 | 0.695 | 1.034 | Males: 0.147 | 0.086 | 1.703 | 0.098 | −0.023 | 0.316 | 0.069 | 0.040 | −0.011 | 0.148 |
| | 12–15 years: 0.530 | 0.086 | 6.155 | < 0.0001 | 0.361 | 0.699 | 0.248 | 0.040 | 0.169 | 0.327 |
| Regulation | Intercept: 3.123 | 0.078 | 39.888 | < 0.0001 | 2.969 | 3.277 | Athletes: 0.531 | 0.078 | 6.783 | < 0.0001 | 0.377 | 0.685 | Males: 0.077 | 0.078 | 0.979 | 0.328 | −0.077 | 0.231 | 0.043 | 0.044 | −0.043 | 0.129 |
| | 12–15 years: −0.066 | 0.078 | −0.844 | 0.399 | −0.220 | 0.088 | −0.037 | 0.044 | −0.123 | 0.049 |
| Utilization | Intercept: 2.995 | 0.071 | 42.366 | < 0.0001 | 2.856 | 3.134 | Athletes: 0.659 | 0.071 | 9.320 | < 0.0001 | 0.520 | 0.798 | Males: 0.022 | 0.071 | 0.307 | 0.759 | −0.117 | 0.161 | 0.013 | 0.041 | −0.067 | 0.092 |
| | 12–15 years: 0.461 | 0.071 | 6.520 | < 0.0001 | 0.322 | 0.600 | 0.265 | 0.041 | 0.185 | 0.345 |
administration and data collection. Each participant volunteered to take part into this study, after signing an informed consent.

Means, standard deviations, kurtosis and skewness were computed for each item and sub-scale of the PEC questionnaire. Regression analyses were performed to shed light on the predictors of each sub-scale/domain of the PEC questionnaire.

All statistical analyses were performed using the commercial software Statistical Package for Social Science (SPSS, version 24.0, IBM, Chicago, IL, USA). Figures with a \( p \)-value < 0.05 were considered statistically significant.

These data could be useful for sports managers, coaches, and athletes, in that they could enhance coaching practices and lead to better performances and results. Psychologists can also use the PEC inventory to distinguish between participants’ gender and age and athletes and non-athletes.

| Source       | Value   | Standard error | t       | Pr > | Lower bound (95%) | Upper bound (95%) | Value   | Standard error | Lower bound (95%) | Upper bound (95%) |
|--------------|---------|----------------|---------|------|-------------------|-------------------|---------|----------------|-------------------|-------------------|
| Identification | Intercept | 2.599 | 0.079 | 32.941 | < 0.0001 | 2.444 | 2.754 | Athletes | 0.959 | 0.079 | 12.159 | < 0.0001 | 0.804 | 1.114 | 0.479 | 0.039 | 0.402 | 0.557 |
|              | Males    | 0.137 | 0.079 | 1.730 | 0.084 | −0.019 | 0.292 | 0.068 | 0.039 | −0.009 | 0.146 |
|              | 12–15 years | 0.335 | 0.079 | 4.241 | < 0.0001 | 0.180 | 0.490 | 0.167 | 0.039 | 0.090 | 0.245 |
| Comprehension | Intercept | 2.923 | 0.080 | 36.464 | < 0.0001 | 2.766 | 3.081 | Athletes | 0.693 | 0.080 | 8.648 | < 0.0001 | 0.536 | 0.851 | 0.364 | 0.042 | 0.282 | 0.447 |
|              | Males    | −0.089 | 0.080 | −1.110 | 0.268 | −0.247 | 0.069 | −0.047 | 0.042 | −0.130 | 0.036 |
|              | 12–15 years | 0.286 | 0.080 | 3.571 | 0.000 | 0.129 | 0.444 | 0.150 | 0.042 | 0.068 | 0.233 |
| Expression   | Intercept | 2.842 | 0.080 | 35.348 | < 0.0001 | 2.684 | 3.000 | Athletes | 0.838 | 0.080 | 10.422 | < 0.0001 | 0.680 | 0.961 | 0.422 | 0.041 | 0.343 | 0.502 |
|              | Males    | 0.016 | 0.080 | 0.201 | 0.840 | −0.142 | 0.174 | 0.008 | 0.041 | −0.071 | 0.088 |
|              | 12–15 years | 0.408 | 0.080 | 5.078 | < 0.0001 | 0.250 | 0.566 | 0.206 | 0.041 | 0.126 | 0.285 |
| Regulation   | Intercept | 3.007 | 0.073 | 41.083 | < 0.0001 | 2.863 | 3.151 | Athletes | 0.656 | 0.073 | 8.959 | < 0.0001 | 0.512 | 0.800 | 0.368 | 0.041 | 0.288 | 0.449 |
|              | Males    | 0.082 | 0.073 | 1.122 | 0.262 | −0.062 | 0.226 | 0.046 | 0.041 | −0.035 | 0.127 |
|              | 12–15 years | 0.434 | 0.073 | 5.923 | < 0.0001 | 0.290 | 0.577 | 0.244 | 0.041 | 0.163 | 0.324 |
| Utilization  | Intercept | 3.240 | 0.079 | 40.762 | < 0.0001 | 3.084 | 3.396 | Athletes | 0.432 | 0.079 | 5.436 | < 0.0001 | 0.276 | 0.588 | 0.240 | 0.044 | 0.153 | 0.327 |
|              | Males    | 0.177 | 0.079 | 2.222 | 0.027 | 0.020 | 0.333 | 0.098 | 0.044 | 0.011 | 0.185 |
|              | 12–15 years | −0.144 | 0.079 | −1.810 | 0.071 | −0.300 | 0.012 | −0.080 | 0.044 | −0.167 | 0.007 |
Acknowledgment

The authors would like to declare that no sources of funding were used in the preparation of this manuscript. They would also like to affirm that they have no conflict of interest that is directly or indirectly relevant to the content of the present manuscript.

Transparency document. Supporting information

Supplementary data associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.dib.2018.03.067.

Table 6
Regression analyses for the summary scores (global, interpersonal and intrapersonal domains) of the “Profile of Emotional Competence” questionnaire.

| Source | Value | Standard error | t     | Pr > | Lower bound | Upper bound | Normalized value | Standard error | Lower bound | Upper bound |
|--------|-------|----------------|-------|-------|-------------|-------------|------------------|---------------|-------------|-------------|
| Global |       |                |       |       |             |             |                  |               |             |             |
| Intercept | 2.887 | 0.056 | 51.431 | < 0.0001 | 2.777 | 2.998 | | | | |
| Athletes | 0.683 | 0.056 | 12.169 | < 0.0001 | 0.573 | 0.793 | 0.475 | 0.039 | 0.398 | 0.552 |
| Males | 0.076 | 0.056 | 1.357 | 0.175 | –0.034 | 0.187 | 0.053 | 0.039 | –0.024 | 0.130 |
| 12–15 years | 0.316 | 0.056 | 5.622 | < 0.0001 | 0.205 | 0.426 | 0.219 | 0.039 | 0.143 | 0.296 |
| Interpersonal |       |                |       |       |             |             |                  |               |             |             |
| Intercept | 2.853 | 0.058 | 48.772 | < 0.0001 | 2.738 | 2.968 | | | | |
| Athletes | 0.651 | 0.058 | 11.125 | < 0.0001 | 0.536 | 0.766 | 0.440 | 0.040 | 0.362 | 0.517 |
| Males | 0.088 | 0.058 | 1.503 | 0.133 | –0.027 | 0.203 | 0.059 | 0.040 | –0.018 | 0.137 |
| 12–15 years | 0.368 | 0.058 | 6.283 | < 0.0001 | 0.253 | 0.482 | 0.248 | 0.040 | 0.171 | 0.326 |
| Intrapersonal |       |                |       |       |             |             |                  |               |             |             |
| Intercept | 2.922 | 0.060 | 48.753 | < 0.0001 | 2.804 | 3.040 | | | | |
| Athletes | 0.716 | 0.060 | 11.940 | < 0.0001 | 0.598 | 0.833 | 0.473 | 0.040 | 0.395 | 0.551 |
| Males | 0.064 | 0.060 | 1.076 | 0.282 | –0.053 | 0.182 | 0.043 | 0.040 | –0.035 | 0.120 |
| 12–15 years | 0.264 | 0.060 | 4.400 | < 0.0001 | 0.146 | 0.382 | 0.174 | 0.040 | 0.096 | 0.252 |

References

[1] P. Salovey, J. Mayer, Emotional intelligence, Imagin. Cogn. Pers. 9 (3) (1990) 185–211.
[2] S. Brasseur, J. Grégoire, R. Bourdu, M. Mikolajczak, The Profile of Emotional Competence (PEC): development and validation of a self-reported measure that fits dimensions of emotional competence theory, PLoS One 8 (5) (2013) e62635.