#48 PAPER 63 -
IMPOSTOR PHENOMENON AND TEST ANXIETY AMONG ROMANIAN GRADUATES OF WALDORF SCHOOL COMPARED TO THOSE OF TRADITIONAL EDUCATION

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Abstract

Waldorf pedagogy is a form of alternative education that stands out for its philosophical vision and integrative methodology, expecting to entail some physical and psychological advantages. The purpose of this study was to explore the dissimilarities between graduates of Waldorf School, and those of traditional education, regarding impostor phenomenon and test anxiety, while also considering gender. The sample comprised 84 Romanian emerging adults who completed Clance Impostor Phenomenon Scale (Clance, 1985) and Westside Test Anxiety Scale (Driscoll, 2007). The Waldorf ex-students reported lower levels of impostor phenomenon and test anxiety. The males of traditional education had the highest scores.

Keywords: Waldorf School; impostor phenomenon; perceived fraudulence; test anxiety; traditional education

1. INTRODUCTION

Based on the life and writings of Rudolf Steiner, Waldorf School arose in 1919 as one of the most powerful alternatives to traditional education considering that it seeks to foster students’ potential through a carefully designed pleasing environment that encompasses a set of distinctive features including: a methodology tailored according to students’ developmental stage; a curriculum based on arts as vehicles for learning; assessment methods other than traditional tests and grades; a partnership with parents; an administrative system in which the teachers are also the school managers; consistent efforts to sustain a sense of community; a holistic approach to education (e.g., Edwards, 2002; Uhrmacher, 1995). Specifically, Waldorf pedagogy engages the whole child/adolescent in the learning process, it has the purpose of educating the “heart and hands, as well as head”, by focusing on the improvement of students’ intellectual level while also working on the development of their aesthetic, spiritual, affective and interpersonal skills (e.g., Easton, 1997). Moreover, it strives to engender the students’ genuine interest and enthusiasm for learning, by providing a variety of dynamic and attractive activities held by dedicated and enthusiastic teachers who treat each student uniquely (Association of Waldorf Schools of North America, n.d.).

The curriculum is organized into an ascending spiral of knowledge in which the current educational experiences are built on prior acquisitions, so, as the students mature, they explore each subject gradually and differently (Barnes, 1991). This learning path follows the three phases of child development described by Steiner as a guide for shaping the educational practices: 1) early childhood (age 0-7) – the main educational focus is on cultivating children’s will in connection to bodily intelligence through imitation and practical and artistic activities such as imaginative creative play; 2) middle childhood (age 7-14) – various arts together with story-telling and retelling are integrated in order to stimulate children’s creativity, imagination and emotional intelligence, facilitating learning in any discipline, whether the topic is mathematics, natural science, social sciences etc.; 3) adolescence (age 14-21) – a higher level of abstracting is engaged and the activities are primarily aimed at training the students’ judgement and decision making (e.g., Schmitt-Stegmann, 1997).

In Waldorf School every day begins with a two-hour lesson, “the main lesson”, which is usually part of a 2-4 week unit, which is enough time for the teachers to integrate a wide range of activities and forms of representation around each theme; next, the students write in their notebooks the key ideas of what they have just learned, and, after a break, they participate to run-through lessons; the afternoons are dedicated to eurythmy (Barnes, 1991; Nicholson, 2000). The main lesson teacher works with the same class from 1st to 8th grade.
building close relationships with children and collaborating with parents; only in high school the class teacher is replaced by specialized teachers (Barnes, 1991). Moreover, each teaching-learning experience is remarkably vivid and creative, considering that the teachers are free to choose a personal way of implementing the curriculum (Easton, 1997).

Despite the long tradition and worldwide popularity of Waldorf pedagogy, few empirical research has focused on measuring its benefits. Reviews of the literature regarding the differences between Waldorf graduates and those of traditional education, with respect to physical health, psychological functioning and educational efficacy, were recently conducted for example by Ianova (2013) and Randoll & Peters (2015), both concluding that Waldorf School tended to bring superior results. Nevertheless, compared to other fields, the research work regarding Waldorf School appears to be rather narrow, while many psychological aspects relevant for one’s well-being are still insufficiently explored. Therefore, the main purpose of this study was to assess the difference between graduates of Waldorf School and those of traditional education, with respect to impostor phenomenon and test anxiety.

Impostor phenomenon is a term that suggestively describes the complex inner experience derived from the personal belief of not having the qualities the persons around are observing and appreciating. The construct has been depicted for the first time by Clance and Imes (1978) as a result of their extensive academic and therapeutic work with numerous outstanding women who had repeatedly underestimated their otherwise noteworthy and well deserved achievements. The experience of feeling like a fraud comprises a specific set of cognitions, emotions and behaviors that come along as a cycle of self-doubting and self-sabotage, especially when the person has to face the situation of giving some kind of performance (e.g., Clance et al., 1995). The most representative features of the impostor phenomenon are: 1) feeling like a fake – the self-perception of deceiving everyone with regard to own competence and cognitive abilities, along with the fear of being unmasked; 2) discounting praise and achievements – the incapacity to correctly assess own performance while constantly focusing on perceived self-deficits and overestimating others’ qualities; 3) attributing success to external factors – the failure to acknowledge own merits in achieving a goal (e.g., Clance & O’Toole, 1987).

Test anxiety refers to symptoms associated with having a test, arises before the test but could also persist until the grade is received, and usually affects test performance, as it comprises the following components: 1) worry – thoughts regarding the possibility of a poor performance on the test; 2) test-irrelevant thinking – thoughts that distract attention from the test; 3) tension – distress, uneasiness, fear and/or panic during tests; 4) bodily reactions - heightened activation of the sympathetic nervous system (Zaromb, Burrus & Roberts, 2012).

Having in mind the particular features of Waldorf education, our study was based on the hypothesis that the graduates of Waldorf School could have milder symptoms of impostor phenomenon and test anxiety, than those of traditional education. Our review of the literature did not reveal any research on this specific topic. Besides the general goal of exploring these differences on a sample of Romanian participants, we particularly sought to analyze the potential gender dissimilarities considering that some previous studies identified higher scores in impostor phenomenon among women (e.g., McGregor et al. 2008), while others found no differences (e.g., Cokley et al., 2013).

2. Method

2.1. Participants and procedure

This research was conducted on a sample of 84 Romanian emerging adults (\(M_{\text{age}} = 20.52; \ SD = 1.37\)) who voluntarily agreed to complete an online form comprised of two self-report questionnaires. Considering that the form was distributed via internet, and that there was no direct contact between the participants and the researchers, the form also included all the details needed for the participants to give their informed consent to take part in our study. The main eligibility criteria were: a) age ranging from 18 years old to 25 years old, which corresponds to late adolescence-young adulthood developmental stages; b) level and type of education – high school graduates irrespective of their current status of university studies, who had previously attended either Waldorf education or traditional education. The sampling was non-probabilistic, by convenience, and we sought to obtain two subgroups of almost equal size, depending on participants’ former education (Waldorf School and traditional education respectively). The Waldorf subgroup comprised 40 persons (\(M_{\text{age}} = 20.20; \ SD = 1.47\)), out of which 20 were females (\(M_{\text{age}} = 19.95; \ SD = 1.35\)) and 20 were males (\(M_{\text{age}} = 20.45; \ SD = 1.57\)). The traditional education subgroup included 44 participants (\(M_{\text{age}} = 20.82; \ SD = 1.22\)), out of which 24 were females (\(M_{\text{age}} = 20.67; \ SD = 1.27\)) and 20 were males (\(M_{\text{age}} = 21; \ SD = 1.17\)).
2.2. Measures

In order to quantitatively assess the participants’ symptoms of perceived self-fraudulence and test anxiety, we used two self-report questionnaires with 5-point Likert type scale response options.

*Clance Impostor Phenomenon Scale* (CIPS; Clance, 1985) provides 20 items that address the cognitive and affective features specific to the groundless internal experience of being an intellectual fraud. The items have been originally phrased with the intention to reduce the effects of social desirability (Holmes et al., 1993) but the instrument has not been validated on the Romanian population yet. Nevertheless, CIPS showed good internal consistency on our sample (see Table 1), as well as on other Romanian samples from previous research (e.g., Dudău, 2014). On American population, CIPS also proved to be a reliable and valid instrument, distinguishable from constructs such as social anxiety, self-esteem, self-monitoring or depression (Chrisman et al., 1995). Usually, the questionnaire is scored as a one-dimension instrument, by simply adding the respondents’ ratings – there are not reverse scores. The obtained sum reflects the frequency and intensity of the overall impostor phenomenon symptoms.

*Westside Test Anxiety Scale* (Driscoll, 2004) is a 10-item, easy to administer instrument used for measuring the performance impairments associated with the common cognitive symptoms of anxiety, such as lack of concentration, poor memory or worry; the questionnaire does not refer to physiological arousal, as it has been weakly related to poor performance (Driscoll, 2004). Research has shown consistently that decreases in Westside Scale are associated with increases in test performance, suggesting that the instrument appears to be a reliable and valid measure (Driscoll, 2007). On our sample, we obtained high values of Cronbach’s alpha (see Table 1), indicating that the questionnaire had good internal consistency.

3. RESULTS

Based on the preliminary data analysis, we concluded that the most suitable, less biased method to compare the graduates of Waldorf School with those of traditional education, was to apply a series of nonparametric tests. Thus, we used two Mann-Whitney tests for the differences between the two subgroups – one for each dependent variable, ignoring the gender variable -, and two Kruskal-Wallis tests followed by the stepwise step-down procedure in order to grasp the specific differences between females and males. A Bonferroni correction should be applied when interpreting the p values of each of these two pairs of statistical tests (Mann-Whitney and Kruskall-Wallis). Thus, in these particular cases, the statistical significance should be indicated by p < .025.

<table>
<thead>
<tr>
<th>Research samples</th>
<th>N</th>
<th>Clance Impostor Phenomenon Scale</th>
<th>Westside Test Anxiety Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Mdn</td>
</tr>
<tr>
<td>Waldorf education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>39.3</td>
<td>9.16</td>
</tr>
<tr>
<td>Females</td>
<td>20</td>
<td>42.60</td>
<td>11.75</td>
</tr>
<tr>
<td>Males</td>
<td>20</td>
<td>35.45</td>
<td>2.66</td>
</tr>
<tr>
<td>Traditional education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>71.43</td>
<td>14.77</td>
</tr>
<tr>
<td>Females</td>
<td>24</td>
<td>66.25</td>
<td>15.21</td>
</tr>
<tr>
<td>Males</td>
<td>20</td>
<td>77.65</td>
<td>11.78</td>
</tr>
<tr>
<td>Waldorf + Traditional</td>
<td>84</td>
<td>56.00</td>
<td>20.43</td>
</tr>
</tbody>
</table>

The Mann-Whitney tests conducted with no regard to gender variable, suggested that the former students of Waldorf School had lower levels of impostor phenomenon \((U = 120; z = -6.81; p = .000; r = .74)\) and test anxiety \((U = 251; z = -5.64; p = .000; r = .61)\), compared to their counterparts (the former students of traditional education).

Next we sought to calculate the differences between females and males depending on their education (Waldorf or traditional). In order to reduce the risk of type I error without losing too much statistical power, we introduced a new independent variable coded as a combination of gender and education. Thus, we obtained four subgroups: females of Waldorf School, males of Waldorf School, females of traditional education, and males of traditional education. The Kruskal-Wallis test revealed that the intensity and frequency of impostor symptoms were statistically affected by this new subgrouping variable \((H(3) = 50.04; p = .000)\). The same results were shown for test anxiety \((H(3) = 36.197; p = .000)\).
Table 2. The nonparametric stepwise step-down procedure for following the Kruskal-Wallis test.

<table>
<thead>
<tr>
<th>Research samples</th>
<th>The homogenous subsets based on gender x education</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>subset 1</td>
<td>subset 2</td>
<td>subset 3</td>
<td>subset 1</td>
<td>subset 2</td>
<td>subset 3</td>
<td>subset 1</td>
</tr>
<tr>
<td></td>
<td>mean of ranks</td>
<td>mean</td>
<td>mean</td>
<td>mean</td>
<td>mean</td>
<td>mean</td>
<td>mean</td>
</tr>
<tr>
<td>Waldorf education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>18.95</td>
<td>-</td>
<td>-</td>
<td>21.52</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Females</td>
<td>28.05</td>
<td>-</td>
<td>-</td>
<td>32.02</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Traditional education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>54.79</td>
<td>-</td>
<td>-</td>
<td>51.50</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Males</td>
<td>-</td>
<td>65.75</td>
<td>-</td>
<td>63.15</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. The similar groups are clustered within the same column.

The step-down follow-up analysis indicated that the males and females graduates of Waldorf education clustered together (subset 1), meaning that they were similar one to another with regard to both impostor phenomenon (adj. \( p = .11 \)) and test anxiety (adj. \( p = .22 \)). Moreover, the females of traditional education reported higher levels of impostor phenomenon and test anxiety, compared to the cluster of females and males ex-students of Waldorf School, but their symptoms were milder than the ones generally experienced by the males of traditional education.

4. CONCLUSIONS

Our study showed that the former students of Waldorf School tended to experience milder symptoms of impostor phenomenon and test anxiety, compared to graduates of traditional education. Considering that the Waldorf pedagogy was designed to holistically address students’ needs, providing a pleasing, healthy environment where multiple intelligences are stimulated and creativity, freedom, self-growth and love for learning are highly promoted, we advance the hypothesis that our obtained differences, could be partly due to the type of education that the participants had attained. Therefore, we recommend further research to verify and perhaps state this possibility with more scientific confidence, as our methodology contains shortcomings that impede causal findings and appropriate generalizations. Clance et al. (1995) theorized that the origins of impostor phenomenon could reside in factors related to family and social environment. Several studies have supported this assumption with respect to some family characteristics including parental overprotection, control and lack of support (for a review, Levesque, 2011), but the results were correlational. Nevertheless, we argue that the search for potential sources of impostor phenomenon and test anxiety should be extended to school environment, where the child frequently faces performance tasks, while having the chance to compare to others and make inferences regarding personal abilities. In Waldorf School all students are encouraged to participate to all kinds of activities irrespectively of their talents, as the purpose is not to prepare specialists in one subject or another, but rather to offer access to a wide palette of experiences in order for the students to become well-balanced individuals (Barnes, 1991). Moreover, in Waldorf School, students’ assessment is continuous and consists of extensive descriptive feedback regarding their portfolios or projects – there are no exams and no grades are given (Edwards, 2002). In contrast, in Romanian traditional schools, students are periodically examined through oral and written tests, and receive grades but often no appropriate feedback. Waldorf School could be regarded as a model for traditional education, but further research is required to select, test and reinforce such presuppositions.
REFERENCES


