Gestalt Group Practice for Increasing Awareness of University Students

Asuman Güner Öztürk
Yeditepe University, Turkey

ABSTRACT

The aim of this study is to increase university students’ awareness and support their personal development through “Gestalt Group Program” that is predicated on Gestalt Therapy. Twelve university students in the second, third and fourth grades of the faculty of education participated in the study. Group study consisted of eight sessions. Each session was determined as 120 minutes. In this study, one of the qualitative research methods, content analysis method was used. To collect data for the study, researcher created “Personal Information Form” and “Gestalt Group Program Evaluation Form” and used on participants. Obtained qualitative data was examined via content analysis method. Finally, “Gestalt Group Program” was found to have a positive impact on raising university students’ awareness.

© 2019 IJPES. All rights reserved

Keywords:
Group, Gestalt, Awareness

1. Introduction

Gestalt Therapy is one of the humanist and existential therapy approaches and was developed by Fritz Perls, Laura Perls and Paul Goodman. In this unique approach, the primary focus is awareness. Gestalt Therapy suggests change can take place with improving people’s awareness. It sees human nature such a positive organism and it believes the creative potential of human beings. The main focus in Gestalt Therapy is to raise human beings’ awareness and fragmentation to integrity. Gestalt Therapy aims not analyse humans, but it targets awareness, integrity and contact with environment. In sum, Gestalt Therapy is a great harmony of body, mind and soul. Gestalt Therapy is such an experimental approach that encourage the exploring and living, it is based on experience and it is a lively approach. It emphasises the importance of contact with environment. Gestalt Therapy approach is phenomenological. Phenomenology examines how people perceive and make sense of events and situations. It focuses on the question of “What is the reality one sees?”. Therefore, it asserts the idea that subjective reality is important. It pays attention to what people perceive and how they make sense of out of things (Houston, 2003; Latner, 1986; Voltan-Acar, 2015; Wheeler, 1991).

Awareness, one of the main aim of Gestalt approach, is a state of one’s being in contact with his sense organs in a specific time with his own existence. Awareness is a form of experience, can be defined as the relationship between the present and the person’s own being. It is the sense of what a person spontaneously does, what he feels, what he thinks, what he experiences. It gives all attention to the “moment” (Perls, 1973; Latner, 1986; Daş, 2009). In the Gestalt approach, the concept of contact, which is considered important for psychological health, is seen as the source of life for survival, growth, development and change. Contact is seen as an inevitable part of living environment, personal change and maturation. Contact can be defined as the person interacting with others and the environment without losing their individuality. It is to meet the needs of the person by contacting and limiting himself/herself (Wheeler, 1991; Perls, 1973; Latner, 1986; Polster ve Polster,
1974). Furthermore, Gestalt Therapy adopts the “here and now” approach. It is important to focus on the present moment by staying in the present and focusing on the relationships and interactions established by the existing people. It is suggested that focusing on here and now increases the effectiveness of therapy groups, and this method will act as an energy source in the group (Perls, 1973; Yalom, 2002).

Gestalt therapy aims to raise one’s awareness in group counselling. The Gestalt approach works through awareness and thematic experiments. A personal development group is a group activity carried out to support the psychological development of individuals; type of group practice involving psychological counselling and psycho-education; a group aims to gain knowledge, development and change in related subjects, meanings and skills. On the other hand, Gestalt approach sees personal development groups as groups where people can raise their awareness, support their own personal development, change themselves in certain areas, find opportunities to get to know themselves better and establish more functional relationships with themselves and their environment (Daş, 2009; Yalom, 2002).

According to this information, it was considered meaningful to conduct an eight-session group study with university students in order to raise awareness based on the Gestalt therapy approach. In this study, it was aimed to increase the awareness of university students and to support their personal development.

2. Method

In this study, as a result of the program applied, it was investigated how the awareness levels and personal development of university students were affected. The independent variable of the research is “Gestalt Group Program”. The dependent variable is “awareness” levels. The research was planned in accordance with the qualitative research method. For qualitative research, content analysis method was used.

In the study, in accordance with the phenomenological approach, the question of “how” was sought from the eyes of the participants about the group work they experienced. The phenomenological perspective, which is one of the foundations of Gestalt therapy, is the way a person perceives and understands himself and his environment in a unique way. It emphasizes the subjective meaning for a person rather than the general meaning of something (Maher, Robertson & Howie, 2011; Daş, 2009; Akkoyun, 2001). Therefore, content analysis method, which is one of the qualitative research methods, was used to reveal the experiences of the students who participated in the group work and the subjective meanings they attributed to these experiences.

2.1 Participants

The research group of this study consists of university students who are enrolled in the faculty of education of a foundation university in Istanbul. Only second, third and fourth year students were accepted to the group practice. In the group study, since it is voluntary and motivation is required for the study, it was deemed appropriate for students to apply for participation in the group. For this purpose, an announcement was made to university students studying in the faculty of education for group practice. As a result of the announcement made for the group work, firstly a presentation form was sent to the students by e-mail and detailed information about the group work was given. A pool of students who applied to participate in the group work was created. Then, the students in this pool were grouped into three groups and an introductory meeting was held. In this meeting, students were informed about group work. Students were asked to fill out the “Personal Information Form”. Individual pre-interviews were conducted with the students who wanted to join the group. As a result of the pre-interview, a list of the students who will join the group was formed. 12 participants were selected. The other 17 students who were not included in the group were invited to participate in the pilot study. A pilot group study was conducted with 11 students who accepted the invitation.

2.2. Instruments

In the study, a “Personal Information Form” and “Gestalt Group Program Evaluation Form” was prepared by the researcher and they were applied on group participants. The participants were asked to fill out the “Gestalt Group Program Evaluation Form” which consisted open-ended questions at the end of the group program. These group program evaluation forms were subjected to content analysis.
2.2.1. Personal Information Form

“Personal Information Form” was prepared by the researcher. It is a form designed to obtain some important information about the participants and to obtain the necessary information in order to include the participants to be included in the research groups. This form includes the information about participants’ life and family information, whether they have received help before, whether they have a group experience and so on.

2.2.2. Gestalt Group Program Evaluation Form

The group participants were asked three open-ended questions prepared by the researcher about the eight-sessions group practice they participated in the “Gestalt Group Program” application. One week after the completion of the eight-sessions group program, the group participants came together on the same day and hour and completed this evaluation form in writing. The main purpose of this evaluation form is to learn from the participants’ point of view how the group practice is and how it affects them. The open-ended questions in the “Gestalt Group Program Evaluation Form” are as follows;

1. “What did you gain awareness about from the eight sessions “Gestalt Group Program” in terms of awareness?”

2. “What kind of changes did you observe in yourself in the eight sessions “Gestalt Group Program?”

3. “What kind of experience was the eight sessions “Gestalt Group Program” for you? Please describe.”

2.3. Gestalt Group Program

“Gestalt Group Program” is a life-based eight-sessions personal development group program that aims to raise awareness through experience, support personal growth, and develop contact patterns. The overall objective of the program is to improve the level of awareness and contact of the participants and to support their personal development in this way. The group study included structured exercises, brief and instructional information, experiential learning opportunities and exchanges in each session. The duration of each session was 120 minutes. At the end of each session, participants were handed out a blank piece of paper and asked to write a letter entitled “letter to myself”. The letters written by the participants about their experiences in each session were kept by the researcher during the program and distributed to the participants in the last session. Session titles of the group work are as follows; acquaintance and grounding, here and now, emotional awareness, contact boundary, contact, trust, awareness, assimilation and termination.

The objectives of the group program are; to make the participants aware of their needs and environment; improving the skills of participants to stay here and now; raising awareness by creating contact opportunities for participants; to develop participants’ ability to recognize, discern and express emotions; to enable participants to raise awareness of the boundaries between themselves and their environment; to enable different (strict, permeable, semi-permeable) boundary forms to be experienced; to provide awareness about emotional, mental and physical dimensions.

2.4. Data Analysis

During the analysis of the data obtained from the “Gestalt Group Program Evaluation Form” by content analysis method, the data were coded, categorized and themes were created. The data obtained from the participants in writing was first subjected to coding process, then divided into categories and themes were reached from the categories. Gestalt therapy approach theory was used in the determination of categories and themes. Since the group program was developed within the scope of the research that is based on the gestalt therapy approach, coding has been performed based on the concepts of “awareness”, “contact”, “contact styles”, “boundary” and “here and now”.

Categories were formed by coding the data obtained from the responses of the group participants to the awareness they gained as a result of the group program. These categories are “emotional dimension”, “mental dimension”, “physical dimension”, “relationship with myself” and these categories were identified as “awareness” theme; “boundaries” and “relationships with others” were established as categories and they
were identified as “contact” theme; the “focus on moment” category was created and identified as “here and now” theme.

As a result of the group program, categories of “physical dimension”, “emotional dimension”, “relationship with myself” were formed by coding the data obtained from the responses of the group participants to the changes they observed in them and these categories were defined as “awareness” theme; “boundaries”, “relationship with others” were established as categories and they were identified as “contact” theme; the “focus on moment” was created as a category and it was designated as “here and now” theme.

As a result of the coding of the data obtained from the answers given by the group participants about how they defined the group program they experienced, three categories were defined as “emotion definitions”, “thought definitions” and “awareness definitions”. Emotion definitions category includes the definitions of direct emotions; thought definitions category includes the definitions of thoughts, awareness category includes the definitions of the participants’ awareness of themselves and their environment.

3. Results

Depending on the general purpose of the study, as a result of the “Gestalt Group Program” which was applied to the group participants, it was evaluated through qualitative data whether the participants’ written answers given in the “Gestalt Group Program Evaluation Form” which was prepared in relation to the expected goals to be achieved were consistent with the results expected from the group sessions. For this purpose, the following statements regarding the three open-ended questions asked to the participants in the group practice were examined:

1. The university students who participated in the group program defined their achieved awareness about the eight-sessions “Gestalt Group Program” in accordance with the aims of the group program and in a positive way.

2. The university students who participated in the group program defined the changes they observed in themselves in the eight-sessions “Gestalt Group Program” in accordance with the aims of the group program and in a positive way.

3. The university students who participated in the group program defined the group work they experienced in the eight-sessions “Gestalt Group Program” in accordance with the aims of the group program and in a positive way.

Table 1. Frequency and percentage table containing the answers of the group participants to the question of what did you gain awareness about as a result of “Gestalt Group Program?”

<table>
<thead>
<tr>
<th>What did you gain awareness about as a result of “Gestalt Group Program”?</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Dimension</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Sensory organs”</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Body’s reactions</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Emotional Dimension</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defining emotions</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Expressing emotions</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Emotion transitions</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Mental Dimension</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embracing all emotions</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Expressing thoughts</strong></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Continued Table 1. Frequency and percentage table containing the answers of the group participants to the question of what did you gain awareness about as a result of “Gestalt Group Program?”

<table>
<thead>
<tr>
<th>Relationship with Myself</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regarding my own needs</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Emotion-mental-physical dimensions</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Regarding aware of myself</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>The relationship with myself</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>The difference between defining and interpreting</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>51</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boundaries</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using over permeable boundary</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Using over strict boundary</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Boundary types</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>36</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationship with Others</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do I contact with others?</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>How do I contact with environment</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Asking for help</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Here and Now</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staying here and now</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Focusing on the “present”</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

| TOTAL | 53 | 100 |

As can be seen in Table 1, themes were obtained from the participants as a result of the group program they participated in. 27 (%51) of the “awareness” theme, 19 (%36) of the “contact” theme and 7 (%13) of the “here and now” theme were obtained from the participants.

Table 2. Frequency and percentage table including the answers of the group participants to the question of “What kind of changes have you observed in yourself as a result of “Gestalt Group Program?”

<table>
<thead>
<tr>
<th>What kind of changes have you observed in yourself as a result of “Gestalt Group Program?”</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Dimension</td>
<td>I started to contact with my body.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Awareness of my senses increased.</td>
<td>1</td>
</tr>
<tr>
<td>Emotional Dimension</td>
<td>I express my emotions more clearly.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>My awareness of anger has increased.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>I started to focus on my emotions</td>
<td>2</td>
</tr>
<tr>
<td>Awareness</td>
<td>I started to separate my emotions and thoughts</td>
<td>1</td>
</tr>
<tr>
<td>Relationship with Myself</td>
<td>I started to focus on myself.</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Awareness of my needs has increased.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>My anxiety level has decreased.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>I started to reconcile with myself.</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>43</td>
</tr>
<tr>
<td>Boundaries</td>
<td>I started saying no.</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Awareness of my boundaries increased.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>I started using a strict boundary.</td>
<td>2</td>
</tr>
<tr>
<td>Contact</td>
<td>Total</td>
<td>11</td>
</tr>
<tr>
<td>Relationship with Others</td>
<td>My contact with people has increased.</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>Here and Now</td>
<td>Staying here and now</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Improvement in attention and focusing</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>TOTAL</td>
<td>43</td>
<td>100</td>
</tr>
</tbody>
</table>
As can be seen in Table 2, the data obtained from the group participants were 19 (%43) related to the “awareness” theme, 11 (%26) was related to the “contact” theme, and 13 (%30) was related to “contact” theme as a result of the group program they participated in.

Table 3. Frequency and percentage table including the answers of the group participants to the question of “How was the experience of the “Gestalt Group Program”?

<table>
<thead>
<tr>
<th>“How was the experience of the “Gestalt Group Program? Please describe.”</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joyful</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Relaxing</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>I came desirously</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Satisfying</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Enjoyable</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Exciting</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Riveting</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>29</td>
</tr>
<tr>
<td>I’m glad that I participated.</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Instructive</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Useful</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Different</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>I can’t forget the experience.</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Filled</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Effective</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Good</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Perfect</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
<td>37</td>
</tr>
<tr>
<td>I have developed self-awareness</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>I met new people</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>My personal development was supported.</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>I accepted life with its better or worse.</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>I had a contact with myself.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>It reminded me to love myself</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I could express my emotions and thoughts</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I could share the same emotions</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15</td>
<td>35</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>44</td>
<td>100</td>
</tr>
</tbody>
</table>

As shown in Table 3, 13 (%29) of “emotions definitions”, 16 (%37) of “thought definitions” and 15 (%35) of “awareness definitions” were obtained from the participants about “how” they defined the group work they experienced as a result of the group program that they participated in.

4. Discussion and Conclusion

In this research, the effectiveness of the “Gestalt Group Program” prepared by the researcher to support the personal development of the students by developing awareness and contact styles was investigated. The general purpose of the research is to examine whether the “Gestalt Group Program” is effective in increasing awareness and personal development of university students.

In Turkey, several studies based on the gestalt therapy approach to individual counseling practice were made (Korkut, 1991; Özhan, 2001); several screening and relationship studies aimed at contact styles (Bozkurt, 2006; Gürsoy, 2009; Gürdil, 2014; Balkaya, 2006; Akça, Şahin ve Vazgeçer, 2011; Kuyumcu, 2005); and a group study was practiced for working adults (Güloğlu, 2005). To sum up, when the studies on Gestalt contact styles are examined, it was seen that the functioning (harmony, balance) of the relationship between the person and the environment and the relationships between the concepts of psychological health especially attachment styles, coping styles, anxiety levels, anger levels, self-perception and interpersonal schemas, psychological...
symptoms, defense mechanisms, coping with stress styles, life satisfaction, trauma and burnout were examined. There is no research on direct awareness based on the gestalt therapy approach. When the studies conducted abroad are examined, it was seen that in these research focus was varying such as; the anxiety levels, self-confidence, self-efficacy, self-concept, self-reference, interpersonal skills, eating disorders, ego defense mechanisms, incest, borderline personality disorder, perceived family environment and police stress. There are various results in the literature that studies conducted to support personal development can make a significant difference in subjects such as awareness, contact, contact styles, psychological well-being and sense of self (McGrath, 1989; Coffey, 1986; Maher, Robertson & Howie, 2011; Myers, 1996; Leininger, 1992).

According to the results of the studies, the group programs based on the gestalt therapy approach provide positive changes in areas such as self-awareness, decreasing anxiety, self-concept, self-confidence, self-efficacy, self-reference, developing interpersonal skills. “Gestalt Group Program” was applied to the participants and when the results of this program were examined, it can be said that the group program based on gestalt approach positively changed the participants' personal awareness (emotional, mental and physical dimensions), their awareness about themselves and interpersonal relationships, their social skills, positive sense of self and contact styles. Therefore, in terms of its content and results, the level of awareness and development of contact patterns are similar and the results of the above-mentioned domestic and international studies are similar.

According to the Gestalt approach, awareness and contact concepts are seen as important in terms of growth, individualization, development, maturation, psychological well-being and change capacities (Daş, 2009; Wheeler, 1991; Polster & Polster, 1974). In this study, it can be said that the results obtained by the content analysis method as a result of group practice in terms of awareness and contact concepts that are wanted to be examined have changed in these areas which are seen as important and the objectives of the group program have been achieved to a great extent. The group program applied in this study was prepared in accordance with the theory and methodology of the gestalt therapy approach and developed in accordance with the theories and methods suggested that the fields (dimensions of existence, sensory organs usage, staying in here and now ability, focus on the present time) needed to raise awareness should be developed. Considering that, it can be concluded that gestalt therapy approach and group program formed by this approach are effective in increasing awareness. The data obtained as a result of the content analysis can be read clearly from the tables in the results section. Instead of numerical data, it is thought that it is meaningful for the participants to indicate the changes and awareness they observe in their own words and thus the direct reading of the results obtained.

As a result, it was found that “gestalt group program” had a positive effect on raising awareness levels of university students. The conclusions of this research can be summarized as follows; The “gestalt group program” is effective in increasing awareness among university students; supports the personal development of university students; affects the experience of university students joining the group “here and now”; increases the awareness of the participants about their emotional, mental, physical dimensions and their relationship with themselves; affects the participants' awareness of the boundaries they use when making “contact”, affects their awareness of boundary types and their relationships with others.

Finally, the qualitative research method used in the research has gained meaning by providing direct information from the eyes of the participants. For this reason, in accordance with the phenomenological point of view which constitutes the basic methodology of gestalt therapy approach, qualitative research methods can be used more in group practices and similar group practices applied in this research. In addition, the group program formed in this study was planned and implemented as eight sessions. The effectiveness of group practice for more than eight sessions can be investigated to improve awareness levels and contact styles; awareness of increasing the number of sessions and its role in influencing contact styles can be investigated.
References


Investigation of Emotional Expression as a Predictor of Psychological Symptoms

Mustafa Koç¹, Tuğba Seda Çolak¹, Betül Düşünceli², Samet Makas³

¹ Düzce University, Turkey, ² Sakarya University, Turkey

ARTICLE INFO

Article History:
Received 22.05.2019
Received in revised form 13.07.2019
Accepted 25.07.2019
Available online 30.09.2019

ABSTRACT

The main purpose of the study is to determine whether the level of emotional expression is a predictor of psychological symptoms. The study was performed with 338 participants, including 170 women and 168 men. Data were collected by “Expressing Feelings Scale” and “SCL-90 Symptom Checklist-90-Revised”. Data was analyzed with Pearson product moment correlation coefficient and regression analysis was performed. According to results, emotional expression was significantly related to psychological symptoms. While the levels of emotional expression have increased, psychological symptoms have decreased. The levels of psychological symptoms were predicted significantly by emotional expression. Finally, emotional expression predicted higher levels of somatization and lower levels of phobic anxiety.

Keywords:
Emotion, expressing, feelings, symptoms, well-being, somatization, phobic anxiety

1. Introduction

In pre-modern society, abnormality was described as soul loss or possession by evil spirits based on animistic thinking. Later, references to physical reasons explained the abnormality by hysteria. There is no medical explanation of physical complaints like intense headache caused by hysteria. In the pre-modern period, characteristic holes called trephine was found in the human skull. It was believed that these holes drilled to save mankind from evil spirits or to relieve intense headache. When the perspective for abnormalities have changed, more medical and humanistic approach have been adopted. In 17th and 18th centuries, extravasation, diarrhea and forcibly regurgitate became the methods used in dealing with abnormality. Later, when the curative effect of affective suggestion was understood, hysterical neurosis was treated by expressing repressed emotions under hypnosis (Rosenhan and Seligman, 1995). The objective in the free association method which can be considered the starting point of psychoanalytic theory was to uncover unconscious thoughts and feelings that had been repressed or ignored. (Seligman, Walker and Rosenhan, 1997). It can be said that whatever reasons attributed to the deterioration of mental health or abnormality, the treatment of factors causing the abnormality or disorder has been recognized as the main objective.

The emotions such as shame, guilt, jealousy, hope begin to develop in childhood and primary school age while the feelings of anger, fear, sadness, joy and love begin to develop during the first year of life (Holodynski and Friedlmeier 2006; Johnson-Laird and Oatley 1989; Plotnik 2009), and relationships with adults which is an attachment figure constitute the core of emotion regulation (Sroufe, 2000). Studies showed that when parents do not support the expressions of their children’s feelings, those children experience...
difficulties in dealing with and expressing their emotions (Sanders, Zeman, Poon and Miller, 2015). Various factors which include the failure in defining the mood were explained by state trait anxiety and depression (Zeman, Shipman and Suveg, 2002).

Emotional expression process reactivates emotional arousal and strengthen social bonds (Rimé, 2007). People who engage in intimate disclosure tend to be liked more than people who disclose at lower levels, people disclose more to those whom they initially like and people like others as a result of having disclosed to them (Collins and Miller, 1994). Emotional self-disclosure is more predictive of intimacy than factual self-disclosure. Self-disclosure of emotion allows for core aspect of the self to be revealed and provide the opportunity for disclosers to be understood and validated thus facilitating the experience of intimacy (Laurenceau, Barrett and Pietromonaco, 1998). Positive emotional expression predicted increase in competence and decrease in negative emotionality (Harker and Keltner 2001), increase in positive self-perceptions and decrease in distress (Hemenover 2003).

Emotional disclosure can be defined as both effective factor on psychological/ subjective well-being and doesn’t have positive effect on mental health. Meads and Nouwen (2005) had reached the result with a meta-analysis of 61 studies that emotional disclosure was not explained as an important factor for physical health and well-being. Koç, İskender, Çolak and Düşünceli (2009) revealed that when emotional disclosure increases, psychopathological symptoms increase, too. Panagopoulou, Kersbergen and Maes (2002) found that psychological distress increases in relation to emotional non-expression, but no effect was shown for emotional expression.

There are some findings revealed the opposite of findings above. According to Fitzgibbons (1986), one of the suitable mechanisms to cope with anger is emotional disclosure. Emotional disclosure has a positive effect on psychological health, especially self-disclosure about traumatic event increases skills about arranging the environment according to personal needs (Hemenover 2003). Bolton, Glenn, Orsillo, Roemer and Litz. (2003) showed that self-disclosure to supportive significant people in life is effective on posttraumatic stress disorder symptoms. Greenberg and Stone (1992) revealed that when severe traumas disclosed, health benefits occurred. Hamilton-West and Quine (2007) found that written emotional disclosure is effective on health and well-being and this finding is supported by several research (Pennebaker 1997; Pennebaker and Chung 2011).

SCL-90-R is one of the most widely used measures of psychological distress in clinical research. The Symptom Checklist-90-R (SCL-90-R) is a relatively self-report instrument. The dimensions of SCL-90-R are somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid thoughts, psychoticism, and “additional items” (Derogatis, 1977). Expressiveness was positively related with some measures of well-being and with daily negative affect. Research findings support that conflict over emotional expressiveness is a variable, having implications for research on personality and health (King and Emmons, 1990). When individuals suppress their emotions, they are at risk for a variety of health problems. On the other hand, expressing emotional experiences improves physical health and psychological well-being. Inhibition of emotional expression continues for extended period of time, can make worse psychological stress (Berry and Pennebaker, 1993). Within this context, it was hypothesized that the emotional expression process help clients to be able to cope with psychological distress. In this work, the predictor role of emotional expression on psychological symptoms was examined.

2. Method

This study aimed to examine whether the level of emotional expression is a predictor of psychological symptoms. Accordingly, this is a quantitative study using the correlational research design. Correlational research designs are used for identifying the relationship between two or more variables and the level of relationship and for predicting the possible outcomes of these relationships (Fraenkel, Wallen, and Hyun, 2012).

2.1. Participants

The data of the study were obtained from 338 people, 170(50,3) of them were female and 168 (49,7) were male. 32 (9,5%) of the participants were secondary school students, 157 (46,4%) were high school students and 149 (44,1%) were undergraduate students. When the participants were examined according to the order
of their siblings, 85 (25.1%) were the first children, 123 (36.4%) were middle and 93 (27.5%) were the last children 37 (11%) were single children.

2.2. Measurement Tools

2.2.1. Symptom Checklist (SCL-90-R)

SCL-90-R is a self-report psychological symptoms scanning tool. It is developed by Derogatis et al. in 1977 to measure the psychological and physical symptoms, the level of compulsion experienced by the individual or the negative stress reaction lived. The validity and reliability study of the scale in Turkish was carried out by Dağ (1991). It is a five-point Likert scale, including never (0), little (1), medium level (2), quite much (3), high level (4). The test consists 90 items and has 10 subscales. The subscales are somatization, obsessive-compulsive, interpersonal sensitivity, anxiety, depression, phobic anxiety, hostility, paranoid thoughts, psychoticism. Reliability study of the scale was carried out by Dağ in 1991 and its Cronbach’s Alpha value was found “.97”.

2.2.2. Emotion Expression Scale (EES)

Emotion Expression Scale (EES) was developed by King and Emmons (1990), Turkish adaptation was performed by Kuzucu (2011). It is used to gauge the general feeling expressions. Scale agents consisting of 16 items based on Likert-type ratings relates to the tendency to express emotions including positive, negative and proximity. Scale provides information on emotional expressions both interpersonal relationships and independently of interpersonal relationships. Items are answered between 1 and 7. 1 show that the item is definitely participate in, 7 people strongly disagree with that item. The high scores in EES show that the tendency to express emotions is high. Reliability of the scale was carried out by Kuzucu (2006) and its Cronbach’s Alpha value was found “.85”.

2.3. Procedure and Data Analysis

Procedure and Statistical Analysis Convenience sampling was used in the selection of the participants. First, permission for administration of the scales to the participants was obtained from the related departments. Then, the participants were informed of the purpose and voluntary nature of the study as well as ensured of anonymity for all of their responses. The self-report questionnaires were administered in a quiet classroom setting, the scales were administered to the students in groups and the measures were counterbalanced in administration. A total of 344 students participated in the study. However, 15 students were excluded since nine of them did not respond to the instruments as required and six were found to produce extreme scores. Therefore, the data from the 329 remaining students were statistically analysed.

In this study, the Pearson correlation coefficient was applied to assess statistical significance for the role of authenticity on subjective vitality. Moreover, in order to test the hypothesis model (i.e. selfalienation and accepting external influence will be negatively associated and authentic living will be positively associated with subjective vitality), structural equation modelling (SEM) was used. Analyses were carried out using LISREL version 8.54 for Windows (Jöreskog and Sorbom, 1996).

3. Findings

3.1. The findings concerning the relationship between emotion expression levels and psychological symptoms

The correlation coefficients of the relationship between psychological symptoms and emotional expression level is given in Table 1.

<table>
<thead>
<tr>
<th>Emotional expression</th>
<th>Somatization</th>
<th>Obsessive Compulsive</th>
<th>Interpersonal Sensitivity</th>
<th>Depression</th>
<th>Anxiety</th>
<th>Hostility</th>
<th>Phobic Anxiety</th>
<th>Paranoid Thoughts</th>
<th>Psychoticism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-.699**</td>
<td>-.648**</td>
<td>-.548**</td>
<td>-.606**</td>
<td>-.620**</td>
<td>-.662**</td>
<td>-.368**</td>
<td>-.501**</td>
<td>-.404**</td>
</tr>
</tbody>
</table>

There is a significant negative relationship between emotional expression level and psychological symptoms. A negative relationship indicates that one of the variable decreases while the other increases. In this context,
it can be said that emotional expression increases while psychological symptoms decrease. The highly affected psychological symptoms on emotional expression are respectively somatization \((r = .699)\), anger, hostility \((r = -.662)\), obsessive-compulsive disorder \((r = -.648)\), anxiety \((r = -.620)\), interpersonal sensitivity \((r = -.548)\), paranoid ideation \((r = -.501)\), psychoticism \((r = -.404)\) and phobic anxiety \((r = -.368)\).

3.2. The findings regarding whether level of emotional expression is a significant predictor of psychological symptoms

In Table 2, the relationship between predictor variables (basic level of emotional expression) and predicted variables (psychological symptoms), the correlation \((R)\), variance explained \((R^2)\), and the results of the test regarding the relationship between predictor variables and predicted variables (Regression coefficient, whether T-test results of the beta value of regression coefficients are meaningful) are given.

Table 2. Regression analysis results of the findings regarding whether there is a significant predictor of the level of expression of emotions for psychological symptoms

<table>
<thead>
<tr>
<th>Predictive Variables</th>
<th>B</th>
<th>Standard Error</th>
<th>(\beta)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>101,625</td>
<td>1,519</td>
<td></td>
<td>66.905**</td>
</tr>
<tr>
<td>Somatization</td>
<td>-5,265</td>
<td>1,458</td>
<td>-2.87</td>
<td>-3.611**</td>
</tr>
<tr>
<td>Obsessive-Compulsive</td>
<td>-3.846</td>
<td>1,295</td>
<td>-2.13</td>
<td>-2.969*</td>
</tr>
<tr>
<td>Interpersonal Sensitivity</td>
<td>-1.088</td>
<td>1,336</td>
<td>-0.59</td>
<td>-0.815</td>
</tr>
<tr>
<td>Depression</td>
<td>2,935</td>
<td>1,600</td>
<td>1.64</td>
<td>1.834</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-8.666</td>
<td>1,682</td>
<td>-4.40</td>
<td>-5.152**</td>
</tr>
<tr>
<td>Hostility</td>
<td>-6.003</td>
<td>1,018</td>
<td>-3.49</td>
<td>-5.894**</td>
</tr>
<tr>
<td>Phobic Anxiety</td>
<td>6,500</td>
<td>1,290</td>
<td>3.09</td>
<td>5.038**</td>
</tr>
<tr>
<td>Paranoid Thoughts</td>
<td>1,235</td>
<td>1,183</td>
<td>.066</td>
<td>1.044</td>
</tr>
<tr>
<td>Psychoticism</td>
<td>2,286</td>
<td>1,297</td>
<td>1.05</td>
<td>1.763</td>
</tr>
</tbody>
</table>

Dependent Variable: Emotional expression, \(*p<0.05; **p<0.01\)

When the analysis examined, it can be said that variation stems from level of emotional expression for somatization \((R=.70, R^2=.49, F=354.49, p<.01)\), for obsessive-compulsive \((R=.65, R^2=.42, F=269.95, p<.01)\), for interpersonal sensitivity \((R=.55, R^2=.30, F=159.31, p<.01)\), for depression \((R=.61, R^2=.39, F=216.27, p<.01)\), for anxiety \((R=.62, R^2=.39, F=232.85, p<.01)\), for hostility \((R=.66, R^2=.44, F=290.06, p<.01)\), phobic anxiety \((R=.37, R^2=.14, F=58.24, p<.01)\), for paranoid thoughts \((R=.50, R^2=.25, F=124.93, p<.01)\), and for psychoticism \((R=.40, R^2=.16, F=72.48, p<.01)\). In short, the variation of psychological symptoms is between .16 and .49.

4. Results and Discussion

The findings of the study revealed that there is a significant negative relationship between level of emotional expression and the psychological symptoms such as somatization, obsessive compulsive disorder, interpersonal sensitivity, depression, anxiety, anger and hostility, phobic anxiety, paranoid thoughts and psychoticism symptoms. In other words, while the level of emotional expression increases, psychological symptoms decrease. According to the psychoanalytic approach, suppressed feelings cause both physical and psychological symptoms. The therapeutic effect of expressing feelings is widely accepted among theorists (Emmons and King 1990). Psychotherapeutic applications to increase the level of emotional expression help individuals to improve their psychological health and to find solutions for psychological problems (Winkelman, 2000). This can be explained by transparency in which an individual regains his/her functionality that was lost by suppression. Besides, emotional expression is considered to be a significant predictor of psychological well-being. The findings of the current study support the previous research.

It was found that the level of emotional expression is a significant predictor of psychological symptoms; somatization, obsessive compulsive disorder, interpersonal sensitivity, depression, anxiety, anger and hostility, phobic anxiety, paranoid thoughts and related psychotic psychological symptoms \((R^2 = between .49 and .14)\). The highly predicted psychological symptoms were found as somatization, hostility, obsessive-compulsive symptoms, depression, anxiety, interpersonal sensitivity, paranoid thoughts, psychotic symptoms and phobic anxiety symptoms, respectively. It can be said that emotional expression is important
for psychological health, somatic symptoms ranked top ($R^2 = .49$) to be predicted by the level of emotional expression.

Somatization is a mental disorder that can be defined by listening carefully to the individual’s culture, personal experiences, habits, as well as being a difficult disorder to describe (Kaplan, Lipkin and Gordon, 1988). The fact that the body reacts with pain or with a disturbance is an indication that the individual wants to inform others about this situation (Kirmayer, 1984). It can be said that the physiological and psychological processes of the body are complementary to each other in the light of this information.

A study they wrote about stressful life experiences showed that patients with mild-to-moderate asthma or rheumatoid arthritis experienced significant clinical changes compared to the control group (Smyth, Stone, Hurewitz and Kael, 1999). When writing is considered as a form of self-expression, it can be said that expressing emotions affects the physical functions of the individual. The findings of the present study are also consistent with these results.

It has been demonstrated that the instability experienced in expressing feelings is associated with obsessive-compulsive tendencies, depression, paranoid thoughts and anxiety (King and Emmons 1990). Katz and Campbell (1994) revealed a significant positive correlation between depression and instability of the expression of emotions, in other words while instability in expressing emotions increases, symptoms of depression also increase. According to these findings, emotional expression can be said to be a significant predictor of psychological symptoms. Expressing one’s feelings to the right person in the right place at the right time and in the right way can be seen as an important skill for mental health. It is of high importance to provide individuals with necessary cognitive, emotional and behavioral skills to express their feelings effectively.

According to the research, there was a significant correlation between expressing emotions and psychological symptoms. In other words, expressing emotions is a factor in reducing psychological symptoms. The psychological pressure to suppress emotions, especially the physical exertion of somatic, inward anger and hostility and emotional distress disorders, the decrease in symptoms of depression is a proof of this result. In this process, the individual’s self-confidence, social support perception, self-acceptance level, self-expression level of factors such as the impact should not be ignored. The research only dealt with the relationship between the level of expressing emotions and psychological symptoms. Research can also be conducted to add or control variables that contribute to more effective and functional expression of emotions.

Research is original because it is the first study to test the effects of expressing emotions on psychological symptoms. It is necessary to express the psychological and somatic consequences of living by suppressing emotions instead of abreacting them. In addition, today’s human beings’ preference of living by repressing the feelings instead of abreacting cause negative emotions in the relations between people. The person is both trying to hide the feeling and live the contrastive feeling of what s/he feels. This may result in a psychological symptom in the framework of a person’s relationship to humans and a psychological problem associated with them. From this point of view, it can be said that the work is up to date. It can be said that it is functional because the research results may set up purpose for therapeutic intervention by the field experts, raise an awareness in the parents that their children need to abreact and in teachers that their students need to abreact.

5. Suggestions

Based on the results of the research, the following suggestions can be made. Unfinished work is defined as unexpressed emotion. One way to be able to express emotions is to end unfinished work later on. In this context, it may be suggested that individuals be educated and encouraged to express their feelings. Being able to express feelings should be thought of as a preventive aid in a sense, measures should be taken to express feelings at home, at school, in social life and class. Expressing emotions should be a phenomenon that should be dealt in the psychological counseling process when psychological symptoms are reduced and then removed. Clients’ admitting their psychological symptom is a consequence of their inability to express their feelings can provide healing. This research may be a reference to field experts in this context.
References


Development and Validation of the Contextual Achievement Motivation Measure

Robert L. Smith¹ and Mehmet A. Karaman²

¹Texas A&M University, Corpus Christi, Department of Educational Psychology and Counseling, Texas, USA
²Kilis 7 Aralık University, Psychological Counseling and Guidance, Kilis, Turkey

ARTICLE INFO
Article History:
Received 02.08.2019
Received in revised form 15.09.2019
Accepted 29.09.2019
Available online 01.10.2019

ABSTRACT
This study investigated the factorial validity of the Contextual Achievement Motivation Measure, assessing achievement motivation in multiple settings with a sample of 493 undergraduate and graduate students. Exploratory factor analysis identified a four-factor model: School (6 items), Employment/Work (6 items), Family (5 items), Community (4 items). These factors accounted for approximately 60% of the variance and correlated in the expected directions with a criterion measure, the Adult Hope Scale. Confirmatory factor analysis indicated that the identified four-factor model fit the data, χ²(182)= 348.10, p< .001; χ²/df = 1.91, Tucker-Lewis index (TLI)= .92, comparison fit index (CFI)= .93, root mean square error of approximation (RMSEA) (.058, .080)= .069, and standardized root-mean square residual (SRMR)= .063. In addition, the scale showed partial scalar invariance between genders. The responses are subject to bias and increased the error in reliability and validity. Implications of the research, at a macro-level, draws attention to the importance of work and one’s performance within family, school and community settings.

Keywords:
Contextual achievement motivation scale, achievement motivation in multiple settings, factor analyses, measurement invariance

1. Introduction

Research on achievement motivation has a long and distinguished history (Alschuler, 1971; Alschuler, 1973; Atkinson, 1957; Atkinson & Feather, 1966; Dweck, 2000; Eccles & Wigfield 1995; Eccles, Wigfield & Schiefele, 1998; Kolb, 1965; McClelland, Atkinson, Clark & Lowell, 1953; McClelland, 1961; McClelland, 1965; Singh, 2011; Smith, 2011; Smith, 2015; Smith & Troth 1975; Steinmayr & Spinath, 2009). A significant number of studies on achievement motivation include samples from business settings. Many of these studies consisting of managers and business professionals are published in The Achieving Society (McClelland, 1961). Research findings in The Achieving Society documents investigations covering twenty-three countries from 1929 to 1950. Findings supported the hypothesis of achievement motivation as a significant predictor of success within the business environment (McClelland, 1961). A lesser number of investigations on achievement motivation have taken place in the educational setting. These studies, often using small samples of public school or college students, have produced mixed results when assessing achievement motivation as a predictor of performance (Awan & Noureen, 2011; Bücker, Nuraydın, Simonsmeier, Schneider, & Luhmann 2018; Kolb, 1965; Lazowski & Hulleman, 2016; Singh, 2011; Smith & Troth, 1975). Extant studies on achievement motivation have been limited to business and educational settings. Perhaps there is a need to broaden the scope of research on achievement motivation by studying individuals performing work life roles in a variety of other settings (Aslan & Kirikkanat, 2013; Elliot & Fryer, 2008; Ogwa, 2018).

¹ Corresponding author’s address: Robert L. Smith, Texas A&M University Corpus Christi, Department of Educational Psychology and Counseling, Corpus Christi, TX.
Telephone: +1 (361) 825-2307
e-mail: Robert.Smith@tamucc.edu

© 2019 IJPES. All rights reserved

© 2019 International Journal of Psychology and Educational Studies (IJPES) is supported by Educational Researches and Publications Association (ERPA)
A plethora of assessments are available that measure one’s general level of achievement motivation (Byrne et al., 2004; Freund, Kuhn, & Holling, 2011; Hermans, 1970; Lang & Fries 2006; Man, Nygard, & Gjesme, 1994; Mandel, Friedland, & Marcus; 1996; Schuler & Prochaska, 2000; Smith, Karaman, Balkin, & Talwar, 2019; Smith, 2015; Smith, 1972). Measures assessing overall levels of achievement motivation often fail to adequately address context including sample, setting, and role of participants. This is considered relevant since a comprehensive reporting of context can allow for generalizability and transferability. For example, does one’s level of achievement motivation at work, differ from involvement with family and community activities, or does one’s level of achievement motivation remain constant across multiple settings? A further examination of this query led the researchers to question whether achievement motivation is constant across settings, or specific to context. The researchers posited that measuring achievement motivation in context was the first step to address these questions.

The significance of the life roles involving family, and community further support the argument for examining achievement motivation in multiple settings. Achievement motivation perhaps is as relevant when working within the family and community as it is in a business, university, or government agency. To argue otherwise, is to minimize specific life roles and perhaps devalue individuals working in settings as the family and community There is extant support for examining achievement motivation in multiple settings involving participants who are engaged in a variety of life roles (Aslan & Kirikkanat, 2013; Dahraei & Adlparvar, 2016; Elliot & Fryer, 2008; Heckhausen, 1967; Ogwa, 2018).

Background of Achievement Motivation and Methods of Measurement

McClelland and his colleagues (1953) defined achievement motivation as “a distinct human motive that involves striving for excellence and personal achievement” (p. 76). The Contextual Achievement Motivation Scale (CAMS) is based on research (Alschuler, 1971; Atkinson, 1957; McClelland, 1965; McClelland et al., 1953) of personality characteristics of high achieving individuals, including cognitive and behavioral patterns associated with one’s drive to perform to a standard of excellence. For over three decades, McClelland and his associates researched the personality characteristics of high achieving individuals. Findings targeted a prototype of high achieving individuals who utilize a set of thoughts and behavior strategies when approaching a task or assignment. Research findings (Alschuler, 1971; Atkinson, 1957; McClelland, 1965; McClelland et al., 1953) support thoughts associated with high achievers.

The first thought associated with high achievers is Achievement Imagery (AI). It refers to thoughts of excellence, including competition with others, competition with self, unique accomplishments, and long-term involvement. The second thought is Need (N). Motivational thinking involves deeply wanting to achieve something. The third characteristic is Action (ACT)—thoughts about action needed to achieving excellence. Another thought of high achieving individuals is Hope of Success (HOS)—thinking of and expecting success before it is achieved. Fear of Failure (FOF) is the opposite of HOS and refers thinking about failing before it happens; worry thoughts. Two other important thoughts are related to feelings. Success Feelings (SF) is thinking about the good feelings after success and Failure Feelings (FF) is thinking about how it will feel after failure. High achievers think of obstacles including World Obstacles (WO) in the environment that could interfere with success and Personal Obstacles (PO) internal to an individual as procrastination, negative thinking, and desire to misuse substances. Help (H) refers to thinking about resources, human and technical, that can help achieve success.

In addition to thoughts that are often used by high achievers, four action strategies / behavior, patterns characterize high producing individuals (Alschuler, 1971; Atkinson, 1957; McClelland, 1965). The action strategies, updated and identified as behavior patterns (Smith, 2015) include:

1) Moderate Risk Taking (MRT)—High achieving individuals tend to take moderate risks. On occasion, it might seem as an individual is taking a high risk. However, in these circumstances it is likely a moderate risk is the result of research already completed. Therefore, the risk is mediated, as it has been carefully assessed. In addition, moderate risk-taking also involves setting goals that are challenging, rather than being unreasonably difficult or not demanding.

2) Use of Immediate Concrete Feedback to Modify Goals (ICF)—High achievers want and then utilize feedback. They desire immediate feedback or an assessment on how they are doing, and therefore seek situations that offer immediate concrete feedback.
3) Personal Responsibility (PR)—Individuals with a high need to achieve like to test how much they can personally accomplish. They like situations where they have a high degree of personal responsibility for their success or failures. They initiate activities in which they can assume personal responsibility.
4) Researching the Environment (RE)—Persons with high levels of achievement motivation are prepared before approaching new situations. They do their research ahead of time so they are confident and intentional. They size up situations, checking out the limits and possibilities— with the end in mind of accomplishing or moving toward a goal.

Thematic Appreciation Test

Researchers initially used the Thematic Appreciation Test (TAT; Murray, 1943) as a method to assess ones’ level of achievement motivation. The Thematic Apperception Test, a projective instrument, elicited unconscious thoughts through oral and written expressions. The developers, Christiana Morgan and Henry Murray, believed that one’s interpretation of ambiguous cues provided indications of personality, drives, and motivation. Adaptations of the TAT evolved, using of a wide range of picture images as a means to assess achievement thinking. Subjects responded to images by writing stories (Atkinson, 1957; Alsuhuler, 1971). The picture activity generated stories that were scored according to the number of achievement images. Subjects completed a narrative describing thoughts, emotions and behaviors of individuals in ambiguous pictures (for example, a child sitting in front of a violin). The stories were coded for achievement-related content including indicators of competition, accomplishments, and commitment to achieve. This technique, labeled as the Picture Story Exercise, (PSE), was used in a number of studies that examined the relationship of n-Ach and performance (Kaplan, Lichtinger, & Gorodetsky 2009).

Self-report Measures

Self-report, paper-pencil instruments measuring achievement motivation evolved as the result of dubious interpretations of projective and quasi-projective tests. The advantage of self-report measures included their ability to be employed in a group setting, and their efficiency of administration time and scoring. The Achievement Motivation Measure, (AMM), is an example of a recently developed psychometrically sound self-report measure that uses 13 items to assesses achievement thinking and behavior patterns, (Smith, et. al., 2019).

Contextual Achievement Motivation Measure

The Contextual Achievement Motivation Measure is an adaptation of two previous instruments, Achievement Motivation Inventory (AMI; Smith, 1972) and the AMM (Smith, et. al., 2019). The CAMM is a unique measure that assesses achievement motivation in multiple settings. The CAMM evolved due to an absence of instruments measuring achievement motivation in diverse life role-work environments. Expanding the scope of the AMM, the CAMM allows researchers the opportunity to investigate levels of achievement motivation across cultures and within several settings. The CAMM measures achievement motivation in context of school, work, family and community. Research questions explored in the study:
1. Are the CAMM scores valid and reliable?
2. Does the CAMM have factorial invariance across gender?

Study 1: Initial Review of Items and Factor Structure

The items used in this survey were derived from the Achievement Motivation Inventory, AMI (Smith, 1972). This inventory consisted of 57 items. Item selection was based on the Achievement Motivation Theory developed by McClelland and colleagues in 1948. McClelland (1961) described achievement motivation as a drive for success, evidenced by persistence and effort in the face of difficulties. Research by McClelland and colleagues identified characteristics; thinking and behavior patterns of high achieving individuals. Based on experts’ feedback of items, and research team collaboration, it was decided to divide the AMI into two measures – The Achievement Motivation Measure (a general assessment of achievement motivation) and the
Contextual Achievement Motivation Measure (an assessment of achievement motivation in multiple settings). This decision was based on the following reasons (a) theoretical foundation of McClelland’s theory and (b) practical use- both instruments can be used independently to assess different criteria of achievement motivation. This study investigated the factorial validity of the CAMM. Thirty-six items were retained. That supported the framework of McClelland’s theory. An exploratory factor analysis (EFA) was conducted.

**Method**

**Participants and Procedure**

The Institution Review Board at the university approved this study. When validating an instrument developed a long time ago, it was important to check if the content was still relevant. Specifically for this instrument, evidence of test content included the examination of item wording and applicability to the present day. Since this instrument was meant for adults, it was administered to a group of 14 graduate students. The researchers discussed all items with the group, and upon agreement with fellow researchers, recommended changes. The process included removing dated examples, altering language, and changing double-barreled items. The items were also re-arranged and streamlined in terms of Achievement Motivation at School, Employment/Work, Family, and Community.

Three hundred and three graduate (n= 102) and undergraduate (n= 201) students participated in this study, including 124 males (41%) and 179 females (179%). The mean age of participants was 23.20 years (SD = 4.69; range, 18-59 years). Participants identified themselves as White or Caucasian (n = 136, 45%), Hispanic or Latino (n = 121, 40%), African American (n = 30, 10%), Asian American (n = 10, 3%), and others (n= 6, 2%).

**Measure**

Contextual Achievement Motivation Measure. The 36-item form of the CAMM was administered. Participants responded to the items using a 5-point scale (0= never----- 4=always), similar to the range that was used in the AMI (Smith, 1972). Thirty-six items were included, intending to measure achievement motivation in the school, employment/work, family, and community settings.

**Preliminary Analysis**

First, descriptive statistics and alpha coefficients were computed for the instrument (see Table 1). Next, the assumption of normality was examined using the cutoff critical values of 2.0 for skewness and 7.0 for kurtosis (Rodriguez, Flores, Flores, Myers, & Vriesema, 2015; West, Finch, & Curran, 1995). All of the items had skewness values less than 2.0 and kurtosis values less than 7.0. To determine if the data were appropriate for factor analysis, the Kaiser-Meyer-Olkin (KMO) was examined. The KMO value of .82 indicated that the data were appropriate for factor analysis.

**Table 1**

<table>
<thead>
<tr>
<th>Scale</th>
<th>EFA Data Set (n= 303)</th>
<th>CFA Data Set (n= 190)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>School</td>
<td>* .52* .19* .17*</td>
<td>* .52* .30* .33* .57*</td>
</tr>
<tr>
<td>Employment</td>
<td>* .18* .26*</td>
<td>* .32* .28* .32*</td>
</tr>
<tr>
<td>Family</td>
<td>* .24*</td>
<td>* .27* .21*</td>
</tr>
<tr>
<td>Community and Leisure</td>
<td>*</td>
<td>* .28*</td>
</tr>
<tr>
<td>Hope</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.84 3.04 1.98 1.49</td>
<td>2.81 3.12 2.16 1.47 53.22</td>
</tr>
<tr>
<td>SD</td>
<td>.84 .86 1.12 1.07</td>
<td>.88 .91 1.16 1.12 6.43</td>
</tr>
<tr>
<td>α</td>
<td>.87 .87 .85 .66</td>
<td>.88 .93 .87 .76 .78</td>
</tr>
</tbody>
</table>

Note. *p< .01
Results

An EFA using principal axis factoring (PAF) with a direct oblimin rotation was conducted on the data. We used an oblique rotation method hypothesizing the relationship between the components of achievement motivation (Tabachnick & Fidell, 2013). Three rules were used to determine what factors were retained. Eigenvalues greater than 1, analysis of the scree plot, and an examination of pattern matrix. Four factors were retained and a corresponding number of scales were created accounting for approximately 60% of the variance in the model. The identification of the 4 factors was based on factor loadings of .40 or greater. Items that were cross-loaded and had loadings less than .40 were omitted. Of the 36 original items included on the CAMM, 15 items were removed reducing the final items to N= 21. The identified four-factor model is School (6 items; Eigenvalue=6.06, σ2= %29), Employment/Work (6 items; Eigenvalue=1.79, σ2= %8.50), Family (5 items; Eigenvalue=3.03, σ2= %14.50), Community (4 items; Eigenvalue=1.78, σ2= %8.50). Table 2 includes factor loadings of the retained items.

Table 2

<table>
<thead>
<tr>
<th>Instrument Items and Factor Loadings</th>
<th>Scale Items</th>
<th>S</th>
<th>W</th>
<th>F</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>In school work, I am (was)</td>
<td></td>
<td>1.</td>
<td>An achiever</td>
<td>.85</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Productive</td>
<td></td>
<td>.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Ambitious</td>
<td></td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Competent</td>
<td></td>
<td>.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Thorough</td>
<td></td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Efficient</td>
<td></td>
<td>.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At My place(s) of employment I am (was)</td>
<td></td>
<td>7.</td>
<td>An achiever</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Productive</td>
<td></td>
<td>.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Ambitious</td>
<td></td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Energetic</td>
<td></td>
<td>.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Thorough</td>
<td></td>
<td>.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Efficient</td>
<td></td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answer each of the following questions how you really are, not how you would like to be</td>
<td></td>
<td>13.</td>
<td>Much of my spare time is well spent with my family.</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Our family actively plays and works together.</td>
<td></td>
<td>.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Our family works as a unit so we can use our time effectively together.</td>
<td></td>
<td>.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>As a family unit we carefully pre-plan our activities.</td>
<td></td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>I think what is best for the family, discuss it, and then work toward that goal.</td>
<td></td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>I intentionally set time aside so that I can help to develop efficient expenditure of community funds and provide the most effective community functions.</td>
<td></td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>I play an active role in several community organizations.</td>
<td></td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>I carefully plan recreational activities.</td>
<td></td>
<td>.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>I take an active part in organizing and seeing that parties are entertaining.</td>
<td></td>
<td>.54</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Factor loadings >.40 are in boldface. S= School; W= Work; F= Family; C= Community. Item in bold indicate scale loading.

To establish further evidence, estimates of reliability for the normative sample were assessed using Cronbach’s Alphas. The reliability estimates for the scores on the sub-scales were between moderate and strong: School (.87), Employment (.87), Family (.85), and Community (.79). Table 1 contains the descriptive
statistics, inter-correlations of the scores from the respective subscales, and results from reliability analysis of scores from each of the individual scales developed as the result of the factor analysis of the CAMS.

**Study 2: Confirmation of Factor Structure and Construct Validity**

In this part of the study, we administered the CAMM to a second group of participants. A confirmatory factor analysis (CFA) and correlational analyses were conducted to demonstrate evidence of internal structure and to confirm factor structure of CAMM (American Educational Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCME], 2014). In addition, we tested the configural, metric, and scalar equivalence of the instrument across men and women by using a multiple group CFA (MGCFA) and CFI difference test (ΔCFI).

Further analyses included the construct validity of the CAMMby examining its correlation with hope. We hypothesized that CAMM scores would be positively correlated with hope since previous studies showed the statistically significant relationship between achievement motivation and hope (Curry, Snyder, Cook, Ruby, & Rehm, 1997; Pang, Villacorta, Chin, & Morrison, 2009)

**Method**

**Participants**

Participants were 190-college freshman enrolled in a First-Year Seminar course in a Learning Communities Program at a regional, public four-year university in South Texas. The mean age of the participants was 18.81 years (SD = .93; range, 18-26 years). More female (n=109, 57.4%) than male (n=81, 42.6%) students participated. Participants identified as White or Caucasian (n=60, 31.6%), African American (n=19, 10%), Asian American (n=5, 1.1%), Hispanic or Latino (n=98, 51.6%), and other (n=8, 4.3%).

**Measures**

Achievement motivation. The 21-item measure, analyzed with the use of AMOS, was retained in Study 1, and was administered to measure achievement motivation.

**Hope.** The Adult Trait Hope Scale (ATHS; Snyder et al., 1991), which measures a person’s level of hope based on goal-directed thinking, was used. The 12-item, self-report scale consists of two subscales: the Pathways subscale and the Agency subscale each comprised of 4 items with 4 remaining distracter items that are not scored. Pathways thinking reflect an individual’s belief he or she can generate successful strategies to achieve his or her goals, and agency thinking indicates an individual’s motivation to pursue his or her goals (Snyder et al., 1991).

Participants’ responded to an 8-point Likert scale to indicate the degree an item best described them. Responses could range from 1 = “Definitely False” to 8 = “Definitely True.” An overall score for hope is calculated by adding the scores on the two subscales, the Pathways subscale and the Agency subscale. Overall scores can range from 8 to 64, with higher scores representing higher levels of hope. Research finding support internal reliability of the ATHS with Cronbach’s alphas ranging from .74 to .84 (Snyder et al., 1991). Additionally, Snyder et al. (1991) established test-retest reliability reporting correlations of .80 or higher at intervals of 10 weeks or more. For the current study Cronbach’s alpha was .78.

**Preliminary Analysis**

First, descriptive statistics and correlations among instruments were computed for the instruments (see Table 1). Next, the assumption of normality was examined using the Kolmogorov-Smirnov test and was not met (p< .01). Upon analyzing the boxplots and skewness (-.79), the value was considered acceptable in order to prove normality (George & Mallery, 2010). We conducted a power analysis to identify a sample size for detecting model fit using Stevens’ (2002) criteria, n/p ≥ 5. Given our sample size of 190, we consider our sample size sufficient for making statistical inferences about model fit.

**Results**

Based on the results of the EFA, the researchers hypothesized that a four-factor model would be an appropriate fit with the data. We conducted a CFA including chi-square, chi-square and degree of freedom ratio ($\chi^2$/df), root-mean-square error of approximation (RMSEA), Tucker-Lewis index (TLI), comparative fit
index (CFI), and standardized root-mean square residual (SRMR) to examine the proposed four-factor model. When inspecting these values, we used standards in which an acceptable model fit is represented in values for the $\chi^2 (p > .05)$, $\chi^2/df < 2.00$, TLI > .90, CFI > .90, SRMR < .08, and RMSEA < .08 (90% CI) (Dimitrov, 2012; Marsh, Hau, & Wen, 2004). Analyses were conducted using AMOS version 23. Reliability estimates in the normative sample were evaluated using Cronbach’s alpha ($\alpha$) to assess internal consistency (see Table 1).

The initial model included four latent variables: School, Employment/Work, Family, and Community. The results showed that the $\chi^2$ was significant for the hypothesized model, $\chi^2(183) = 390.24, p < .05; \chi^2/df = 2.13$. The fit indices indicated an acceptable fit for the data, TLI = .90, CFI = .91, RMSEA = .077 (90% CI = .067-.088), and SRMR = .062. The authors reviewed modification indices (MIs) to reach a better model fit.

Modification indices suggested adding an error covariance between item 11 and item 12 to improve the model. After examining item 11 (i.e. At my place [s] of employment I am [was] through) and item 12 (i.e. At my place [s] of employment, I am [was] efficient), we determined that these two items were under the same latent variable (Employment) [see Figure 1] and measured similar constructs. After adding an error covariance between item 11 and 12, the model was rerun; $\chi^2(182) = 348.10, p < .001; \chi^2/df = 1.91$, TLI = .92, CFI = .93, RMSEA = .069 (90% CI = .058-.080), and SRMR = .063. The $\Delta \chi^2$ result indicated that the modified model improved dramatically, $\Delta \chi^2(1) = 42.14, p < .001$. Although, there were few additional modifications, we did not make additional changes since it would not result in significant changes in fit indices.

**Figure 1.** The final confirmatory factor analysis model of Contextual Achievement Motivation Measure (CAMM). The standardized parameter estimates for the CAMM are listed. Error covariance was added between Items 11 and 12. Rectangles indicate the 21 items on the CAMM, and ovals represent the 4 latent factors of subscales.
Measurement Invariance

In this step, we examined the measurement invariance of the four-factor model across gender. There are two commonly used methods, which are chi-square difference test (Δχ2) and CFI difference test (ΔCFI), well documented in the literature (e.g., Byrne, 2010; Dimitrov, 2010; Sulik et al., 2010) to testing for measurement invariance. Chi-square difference testing is the classical approach testing the difference between the χ2 values for the configural and other models (Byrne, 2010; Jöreskog, 1971). The Δχ2 should not be statistically significant at a pre-specified alpha level (e.g., .05) across groups for measurement invariance. Over the past decades, it has been well-documented that χ2 test is sensitive to sample size (Cheung & Rensvold, 2002; Dimitrov, 2010). Cheung and Rensvold (2002) recommended using the CFI difference since it was not affected by measurement accuracy in the overall model (Dimitrov, 2010). Cheung and Rensvold (2002) suggested using .010 cutoff score for ΔCFI test. Taking into account our sample size of 190 in the Study 2, we decided to compare change in both χ2 and CFIs.

We specified three models, configural model (factor loadings and intercepts vary between groups), metric model (factor loading are equal between groups but intercepts vary), and scalar model (both intercepts and loadings are equal between groups), to test the measurement invariance. The configural model fit the data well [χ2(365)= 561.87, RMSEA = .054 (90% CI= .045-.062), CFI= .920, TLI= .908], as did the metric model [χ2(382)= 583.95, RMSEA = .053 (90% CI= .044-.061), CFI= .918, TLI= .909]. The Δχ2 test between the configural and metric models was nonsignificant, χ2(17)= 22.08, p=.18, suggesting that invariance between the genders was achieved. The ΔCFI test (.002) gave same result, suggesting the metric model fit as well as configural model. Next, we examined the scalar invariance. This model had an acceptable fit, χ2(403)= 637.83, RMSEA = .056 (90% CI= .047-.064), CFI= .904, TLI= .900, but the Δχ2 test between the metric and scalar models was significant, χ2(21)= 53.88, p<.001. Furthermore, the ΔCFI test value (.014) was over the cutoff score showing that full scalar invariance was not met. Following Dimitrov’s (2010) and Sulik et al.’s (2010) suggestions, we examined MIs for a higher drop in the model’s χ2. After reviewing MIs, we found that item 20 and item 21 had greater and significant values. Following the recommendation to free one parameter at a time, intercept for item 21 was allowed to have different estimates across the genders. However, the resulting Δχ2 test was still significant and ΔCFI had a value over .01. After freeing the intercepts for both items, modification indices produced a model with acceptable fit, χ2(391)= 598.25, RMSEA = .053 (90% CI= .044-.061), CFI= .915, TLI= .909, and resulted in a nonsignificant χ2 test, χ2(9)= 14.3, p=.11. The ΔCFI test had also a better result (.003). Based on these results, we can conclude that the CAMM has partial measurement invariance.

Validity Evidence Based on Relations with Other Variables

To address evidence of relationship to other variables (AERA, APA, & NCME, 2014) for the AMOS, correlational analysis were conducted with the ATHS (Snyder et al., 1991). We examined bivariate correlations of the subscale scores. Table 3 provides the descriptive data and correlations for each of the instruments. As this table shows, we found evidence for criterion validity. A statistically significant and positive relationship was found between the CAMM subscales and the ATHS subscales. Based on this analysis, higher achievement motivation scores were correlated with higher level of hope.

Discussion

The purpose of this study was to develop and validate a broad and unique achievement motivation measure assessing this concept in multiple settings (School, Work, Family, and Community). Despite the large number of measures developed to assess achievement motivation, an instrument focusing on achievement motivation in multiple settings has not been developed. The CAMM is an instrument that assesses achievement motivation in the context of school, work, family, and community. The CAMM evolved from research findings that tested the psychometric properties of previous measures, the AMI and AMM. The CAMM presents researchers with a broader perspective of achievement motivation, emphasizing its relevance in performing a number of activities considered important and valued in society. Access to the CAMM allows researchers to investigate levels of achievement motivation in multiple settings and compare findings across cultures.
The current study, supported by McClelland and Atkinson’s achievement motivation theory of personality characteristics and the AMI, led to the creation a contextual measure of achievement motivation. Achievement motivation theory of personality characteristics include cognitive and behavioral patterns associated with one’s drive to perform to a standard of excellence. The original instrument used to assess achievement motivation in multiple settings, AMI, highlighted four settings (School, Work, Family, and Community) measuring achievement motivation patterns of individuals. The EFA explored the theory and assessed the AMI, producing a 4-factor-21-item model.

The first factor, School Setting, refers to all levels of education and school types, and includes six items. This factor had the highest eigenvalue (6.03) and explained 29% of the variance across all of the items. The factor measures both past and current perception of achievement in school work. A sample statement is “In school work, I am (was) an achiever.” In this way, the perception of achievement in school in one’s life who is currently not a student can be measured. In addition, a student’s current and past perception of achievement can be measured. The second factor, Family Setting and measures how an individual really are, not how he/she would like to be. This factor included five items and had an eigenvalue of 3.03 and it explained 14.50% of the variance. This factor measures how much an individual can integrate with his family and spend time efficiently with items like “Our family works as a unit so we can use our time effectively together.” The third factor is Work Setting, refers to one’s places of employment or is the place one’s activities will benefit his/her professional development. The eigenvalue for this scale was 1.79 and it explained 8.50% of the variance. This factor includes six items like “At my place(s) of employment I am (was) efficient.” The last factor, Community Setting, refers to individuals’ roles and responsibilities they get in communities and organizations. The eigenvalue for this scale was 1.78 and it explained 8.50% of the variance. This factor measures one’s achievement motivation through four items like “I play an active role in several community organizations.”

The CFA confirmed the hypothesized 4-factor-21-item model. Although the four-factor structure was acceptable for the sample, there were modifications suggested between items 11 and 12. Item 11 (i.e. At my place(s) of employment I am (was) thorough) and item 12 (i.e. At my place(s) of employment I am (was) efficient), which had a correlation of .49 and both fall under the Work Setting factor. We believe that the meanings of these adjectives were close and participants may have marked them with similar considerations. Thorough is “painstaking and careful not to miss or omit any detail while efficient is making good, thorough, or careful use of resources” (WikiDiff, n.d.). As seen in this definition, “thorough” is a part of “efficient” as well.

The results supported the theoretical based 4-factor model providing good evidence based on relations to other variables (AERA et al., 2014). As we hypothesized, CAMM scores were positively correlated with hope. This finding was consistent with previous studies (Curry et al., 1997; Pang et al., 2009) stating higher achievement motivation was associated with higher hope. In the current study, the highest correlation was between hope and achievement motivation in school setting (r=.57). One reason of this could be related to participants. Individuals in the study were university students and may have evaluated and associated their current role (student) with hope. Moreover, reliability analysis showed that the CAMM was a reliable instrument based on Cronbach’s alpha scores. The alpha scores ranged from moderate to strong. While the lowest score was belong to Community Setting subscale (α=.76), the highest score was belong to Work Setting subscale (α=.93).

Another important finding worth discussion was measurement invariance. The validation process included comparison between males and females on the CAMM. It is important to be sure that an instrument measures same theoretical construct in the same way for each group (Dimitrov, 2010). Therefore, configural model (factor loadings and intercepts vary between groups), metric model (factor loading are equal between groups but intercepts vary), and scalar model (both intercepts and loadings are equal between groups) were tested. The results indicated that after freeing items 20 and 21 parameters, the CAMM had partial measurement invariance. In other words, all the items except items 20 and 21 measured same construct for both males and females. This finding supported the construct validity of the CAMM.
Limitations

The present study contributed to the empirical literature on measures of achievement motivation. A significant contribution was the development of a measure to assess achievement motivation in context, involving several settings. However, the findings from this study are limited in the generalizability of results due to the sample employed. The sample consisted of undergraduate and graduate students attending a university in Southwest Texas. Therefore the potential for demographic representation to be fairly homogenous exists. In addition self-reported responses on questionnaires and surveys were used. The responses are subject to bias and increased the error in reliability and validity. Participants may have selected socially desirable responses.

Limitations can be corrected by repetition of the study in diverse settings, as well as using varied sampling procedures. In order to safeguard against dishonest responses to survey items dummy questions could be employed to assess unusual survey markings. Additional measures beyond the Adult Hope Scale will allow an assessment of discriminate validity for the instrument developed in this study.

Implications

During the last several decades there has been a plethora of instruments created to measure achievement motivation. The majority of these measures assessing achievement motivation have been employed in business work settings including managers and chief executives. There is a void of instruments designed to measure achievement motivation in settings beyond one’s work environment. The researchers posit however, that achievement motivation concepts play an important role in most settings; including family, school, and the community. Could it be that achievement motivation concepts are not viewed as relevant to those taking care of one’s family, working in the community or attending school? Are these settings viewed as less important because many are nonpaying? By ignoring research on levels of achievement motivation in settings other than business and education it could be implied that concepts as goal setting, success feelings, fear of failure, taking personal responsibility for task completion, and desiring feedback, are not relevant in family, community, or school environments. A psychometrically sound instrument, the CAMS, provides researchers with a way to assess levels of achievement motivation in multiple settings.

Implications of the research, at a macro-level, draws attention to the importance of work, and one’s performance within family, school, and community settings. The lack of instruments measuring levels of achievement motivation in settings outside of business and education is alarming. Yet, it is clear from observation, there are high achieving, high performing individuals in multiple settings. The impact of this study perhaps could include a change in perception and values attributed to individuals involved in life roles, working within the family and community. These are the work settings, part-time and full time, performed by a large number of individuals in society. The ability to assess levels of achievement motivation of high performers in multiple settings, perhaps will lead to further recognizing the value of the roles and individuals’ performing in these settings.

Micro-level implications include the utilization of an achievement motivation measure focusing on multiple settings. By exploring achievement motivation in multiple settings, implications for broadening the scope of research is promising. Researchers are presented with exploring an unlimited number of study possibilities. The availability of the CAMM and other measures will hopefully encourage research that assesses achievement motivation levels in family, community, school and multiple settings, along with reporting and comparing findings across cultural groups.

References


Steinmayr, R., & Spinath, B. (2009). The importance of motivation as a predictor of school achievement. Learning and Individual Differences, 19, 80-90. doi:10.1016/j.lindif.2008.05.004


Inclusive Education Through the Eyes of Teachers

Ünal Şimşek1 & Bahadir Kılcan2

1 Aksaray University, Faculty of Education, Aksaray, Turkey
2 Gazi University, Faculty of Education, Ankara, Turkey

ARTICLE INFO

Article History:
Received 17.07.2019
Received in revised form 02.08.2019
Accepted 05.08.2019
Available online 30.09.2019

ABSTRACT

This research was conducted in order to determine the present situation, as experienced by teachers from different branches, serving in secondary schools of the Ministry of National Education in Aksaray, regarding inclusive education. In the literature search, ERIC & Taylor Francis database was searched over keywords. The articles related to the problem situation of the research were selected and included in the article. In addition, the sources I have access to have been used while writing the literature and these studies have been included in the bibliography. More specifically, a total of 22 teachers from six different branches serving in secondary schools of the Ministry of National Education in Aksaray Central District (Turkey) participated in the present research, which combined a qualitative research method and a case study. Purposive sampling and convenience sampling among nonrandom sampling types were used in order to select the research participants. The selection criteria were as follows: serving in secondary schools of the Ministry of National Education in Aksaray Central District (Turkey), having students in their class from disadvantaged groups. Research data were collected via semi-structured interviews with questions devised by the authors in accordance with the related literature and research objectives. In the analysis of the data, content analysis methodology was utilized. In the research, it was found that teachers have a general idea about what inclusive education is, and that they think inclusive education is necessary and has advantages and disadvantages according to the way it is applied, that teachers and students should have in-service training to improve of inclusive education, and that improving schools' physical opportunities was a factor in improving inclusive education. Research results were discussed in relation to the related literature and some suggestions were presented.

© 2019 IJPES. All rights reserved

Keywords:
Inclusive Education, Qualitative Research, Teacher’s Points of View

1. Introduction

Given recent developments in the world, updating education policies is one of the leading topics in the context of social justice. The fact that not all members of society can enjoy equal rights to education, even though some countries seek to protect these rights with legal safeguards, updating education policies may be considered as one of the most important needs. Moisâ (2012) mentions that excluded members of society are not involved in decision-making processes, which means they are forced to live a life in isolation. This causes individuals to lose their sense of belonging to society, reduce social interaction to a minimum and internalize these negativities (European Commission, 2010; Ladanyi, & Szelenyi, 2006; Moisâ, 2012). Sanchez (2012) reports that countries tend to pursue social inclusion policies for excluded people to enable them to be involved in society once again. Indeed, the USA introduced regulations from the beginning of the 1900s, although it was not until 1993 that all states had accepted the legal regulations regarding extensive schooling, which enables the integration of students in need of special education into the educational environment (Hossain, 2012). A joint declaration was issued following the formation of the Education for All (EFA) movement within UNESCO to
highlight what needed to be done, while drawing attention to the regulations from the USA, involving the participation of 300 participants on behalf of 92 governments in 1994, in Salamanca, Spain. With this movement, the importance of including all students in education, caring about differences, planning to include all schools in the integration process and standing up for quality education for all was emphasized by all participating countries (UNESCO, 1994). This movement’s position here is acknowledged as an international declaration asserting the rights of individuals in need of special education (Eklindh, & Brule-Balescut, 2006). Yet, Warnock stated that focusing only on students in need of special education at schools could have negative consequences, along with changing conditions, and suggested that it creating a school environment including socially disadvantaged individuals was a better alternative (Warnock, 1979). Including disadvantaged children in the school environment increases student diversity. But, what are these disadvantaged groups? IMCE (2017) answered this question by categorizing the students in disadvantaged groups as follows: a) girls, b) disabled children, c) children in need of special education, d) working children, g) children from poor families, f) children living in war zones, e) displaced children (asylum seekers and refugees).

As seen in the present classification, there are millions of people who have a place in society, while there are others looking for a new safe place to live away from their country of birth or as a result of international migration. This social mobility is reflected in the educational environment. In order to prevent increasing student diversity from harming social structures at schools, different perspectives are required (Sanchez-Marti & Ramirez-Inguez, 2012). One of these different perspectives belongs to UNESCO, which has introduced a new perspective that is going to change our thoughts regarding the development of social diversity in the educational environment. In other words, UNESCO has stated that it is required to reveal differences and diversity in the educational environment from an inclusionary perspective. Thus, the inclusive education population has been expanded, such that it includes not only students in need of special education but also all other students from disadvantaged groups. Providing equal and quality education for all is the aim of inclusive education (UNESCO, 2001). All school staff, students and parents have important roles to play in embedding acceptance for this perspective in schools. Further, it is necessary for all educational partners to reject negative attitudes, behaviors and mentalities for integration in schools to be realized (Booth & Ainscow, 1998). A great deal of responsibility falls on teachers, given that they are the ones who interact the most with students, i.e., they execute inclusive education practices. Since teachers act as an intermediary between society and school and are generally role models in the eye of students, teachers’ attitudes are predictive factors. Teachers are also required to cooperate with each other, act in unison and share their experiences in the classroom to ensure the success of inclusive education (Ainscow, 2005; Hiebert, Gallimore & Stigler, 2002; Huberman, 1993; Lambert, Walker, Zimmerman, Cooper, Lambert, Gardner & Ford-Slack, 1995; Little & McLaughlin, 1993; Riehl, 2000; Şimşek, 2017). In this context, the aim of the study is to determine the present situation faced by teachers as among the important partners in the progress of inclusive education. For this purpose, answers to the questions below were formulated to elicit teachers’ views:

1. What does inclusive education mean to you?
2. What are your opinions regarding the necessity of inclusive education?
3. What do you think about the potential benefits of the inclusive education for students?
4. How can inclusive education become more effective?

2. Methods

2.1. Research Design

This study was designed to include qualitative research and a case study. While a case study focuses on “how” and “why” questions in qualitative research, the present situation can only be revealed with taking individual and group factors regarding the research problem into account (Hitchcock & Hughes, 1995; Yıldırım & Şimşek, 2016). According to Yıldırım and Şimşek (2016) qualitative research; and qualitative data collection methods such as observation, interview and document analysis are used, and a qualitative process for the realistic and holistic presentation of perceptions and events in the natural environment is followed. Balcı (2015) considered the following three stages inevitable must-have for qualitative study. These; 1- Establishing the theoretical framework that will be the basis of research 2-the researcher to form a systematic, feasible and flexible research design 3- The researcher listed the findings of the research as a consistent and meaningful document that the reader can understand and present it to the reader. In this study, it is required to use a case study design since
we examined, given the topic’s specific conditions and contexts, the opinions of teachers serving in secondary schools in Aksaray Central District about what inclusive education is, whether it is necessary and how it can be improved.

2.2. Participants

The study group consisted of 22 teachers from six different branches serving in secondary schools of the Ministry of National Education in Aksaray Central District. In the process of determining the participants of the research, purposive and convenience sampling involving nonrandom sampling types was used. In the process of purposive sampling, criterion and maximum variation sampling methods were used, in such a way that they supported each other. According to this, primarily criteria were chosen to determine the teachers who would participate in the research, i.e., serving in secondary schools of the Ministry of National Education in Aksaray Central District and having students from disadvantaged groups. Then, a maximum variation sampling process was functionalized in the research by agreeing that the selected participants should serve in as many different branches as possible. In that context, 22 teachers from six different branches (technology design teacher, religious culture and moral knowledge teacher, social studies teacher, Turkish teacher, science and technology teacher, and elementary mathematics teacher) serving at secondary schools of the Ministry of National Education in Aksaray Central District were chosen to participate in the research using convenience sampling, as well as applying the criteria given above and taking into account the ease of access to the respective schools. Demographic information on the participants is given in Table 1 below.

Table 1. Demographic information about the participants in the study group

<table>
<thead>
<tr>
<th>Participant's name</th>
<th>Branch</th>
<th>Gender</th>
<th>Years of service</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Technology design teacher</td>
<td>Male</td>
<td>23 years</td>
</tr>
<tr>
<td>P2</td>
<td>Religious culture and moral knowledge teacher</td>
<td>Female</td>
<td>8 years</td>
</tr>
<tr>
<td>P3</td>
<td>Social studies teacher</td>
<td>Male</td>
<td>7 years</td>
</tr>
<tr>
<td>P4</td>
<td>Turkish teacher</td>
<td>Female</td>
<td>9 years</td>
</tr>
<tr>
<td>P5</td>
<td>Science and technology teacher</td>
<td>Male</td>
<td>13 years</td>
</tr>
<tr>
<td>P6</td>
<td>Elementary mathematics teacher</td>
<td>Male</td>
<td>8 years</td>
</tr>
<tr>
<td>P7</td>
<td>Social studies teacher</td>
<td>Male</td>
<td>4 years</td>
</tr>
<tr>
<td>P8</td>
<td>Turkish teacher</td>
<td>Male</td>
<td>8 years</td>
</tr>
<tr>
<td>P9</td>
<td>Turkish teacher</td>
<td>Male</td>
<td>18 years</td>
</tr>
<tr>
<td>P10</td>
<td>Social studies teacher</td>
<td>Male</td>
<td>24 years</td>
</tr>
<tr>
<td>P11</td>
<td>Social studies teacher</td>
<td>Female</td>
<td>3 years</td>
</tr>
<tr>
<td>P12</td>
<td>Elementary mathematics teacher</td>
<td>Female</td>
<td>12 years</td>
</tr>
<tr>
<td>P13</td>
<td>Science and technology teacher</td>
<td>Female</td>
<td>17 years</td>
</tr>
<tr>
<td>P14</td>
<td>Social studies teacher</td>
<td>Female</td>
<td>19 years</td>
</tr>
<tr>
<td>P15</td>
<td>Turkish teacher</td>
<td>Male</td>
<td>18 years</td>
</tr>
<tr>
<td>P16</td>
<td>Religious culture and moral knowledge teacher</td>
<td>Female</td>
<td>4 years</td>
</tr>
<tr>
<td>P17</td>
<td>Technology design teacher</td>
<td>Female</td>
<td>14 years</td>
</tr>
<tr>
<td>P18</td>
<td>Turkish teacher</td>
<td>Female</td>
<td>22 years</td>
</tr>
<tr>
<td>P19</td>
<td>Turkish teacher</td>
<td>Male</td>
<td>19 years</td>
</tr>
<tr>
<td>P20</td>
<td>Social studies teacher</td>
<td>Male</td>
<td>23 years</td>
</tr>
<tr>
<td>P21</td>
<td>Elementary mathematics teacher</td>
<td>Female</td>
<td>8 years</td>
</tr>
<tr>
<td>P22</td>
<td>Elementary mathematics teacher</td>
<td>Female</td>
<td>18 years</td>
</tr>
</tbody>
</table>

2.3. Data Collection Tool

In the process of data collection for this research, a semi-structured interview form was created by the researchers informed by the literature and expert opinion. The interview is an effective method for gathering information about individuals’ experiences, attitudes, opinions, complaints, feelings and beliefs (Yildirim &
Şimşek, 2016). This method also enables instant feedback and offers researchers the flexibility to change the number and order of the questions (Çepni, 2005; Ekiz, 2003; Karasar, 2010; Yıldırım & Şimşek, 2016). Semi-structured interview is used because of its features such as allowing the data to be quickly coded and analyzed, and helps to compare the similarities and differences between the participants’ given information. The advantages of a semi-structured interview are these: The flexibility of unstructured interview and key questions increase comparability. The disadvantage of a semi-structured interview are these following: Probe questions selected by the interviewer may increase participants’ prejudice and limit the comparability of answers (Büyüköztürk, Çokluk & Köklü, 2011; Çepni, 2005).

There were four questions about inclusive education on the interview form. As a result, the participants were asked about what inclusive education means to them, whether or not it is necessary, whether it is advantageous or disadvantageous, and their suggestions to improve it. Besides, a four-stage process was followed to prepare the interview form with the aim of effectively collecting data in the research process. In the first stage, literature related to the research subject was reviewed and a draft interview form was created in accordance with the research objectives. In the second stage, a draft interview form was presented to three lecturers, two of whom have conducted related studies while the third is an expert in assessment and evaluation in education, for their opinions. After their review, some changes were made to the interview form. In the third stage, the opinions of a lecturer from the Department of Turkish Teaching were received in terms of spelling and incomprehensibility and the interview form was put into its final form in this context. In the fourth stage, the interview form was controlled by trialing it with three teachers who were not participants. Based on the answers from these three teachers, the questions were understood to be comprehensible and easily answerable, and the interview form was made ready for the actual application.

2.4. Data Collection

A pre-interview was executed by going to the schools where the participants of the research were serving and asking them if they were willing to be interviewed on a voluntary basis; if so, date and venue were mutually agreed. Before the interview, the objective of the study was explained to the participants in detail; it was also mentioned that the interview was voluntary, that it could be ended by the participant at any time, and that it would be sound recorded to prevent data loss. Once the required consent was given, the interview was conducted. Creswell (2007) emphasized that one should not ignore the codes of conduct that should be followed during qualitative research. At this point, it should be explained that information that belongs to the participants will not be shared in any other environment, that the sound recordings were taken with their consent and that the participants could give their answers freely, and that the interviews were conducted in the frame of the codes of conduct. The interviews also took about 45-50 minutes.

2.5. Data Analysis

Data were analyzed in the frame of the answers given to four open-ended questions on the semi-structured interview form. The content analysis methodology is described as a repeatable method based on coding, i.e., summarizing text using smaller content categories. In this sense, there should be a unity between content, results and repeated expressions in the content analysis; otherwise, the analysis becomes meaningless and inadequate. The main point of the content analysis is to make the categories clear by correlating them with environmental situations (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2008; Wamboldt, 2009; Yıldırım & Şimşek, 2016). By applying content analysis to the interview questions, themes and sub-themes as well as frequency and percentage values, were obtained as shown in the tables below. Besides, participants’ opinions supporting the themes and sub-themes were given in quotes and written in italics. In order to prevent confusion with regard to participants’ opinions, each of the 22 participants was allocated an anonymous label between P1 and P22.

2.6. Validity and Reliability

Validity in qualitative research can be described as stating the topic objectively in the frame of the main problem (Yıldırım & Şimşek, 2016). At this point, four main strategies, i.e., dependability, credibility, transferability and confirmability as trustworthiness criteria ensure the rigour of qualitative findings (Lincoln & Guba, 2000). Dependability is generally concerned with research’s ability to reflect the truth. In this study, long periods of interaction and participant confirmation, which are among the methods for increasing
persuasiveness, were utilized. According to this, in-depth interviews were carried out with the participants, while providing a comfortable atmosphere and following pertinent codes of conduct. Furthermore, the research’s validity was confirmed by four domain experts, three of who are specialists in their respective fields while the fourth is an expert in evaluating spelling and incomprehensibility. Approval was assumed on account of the feedback on the draft interview form from three teachers other than the participants, and on the basis that participants were presented with the content of the said study and that their opinions were recorded using sound-recording equipment and transcribed with their consent. Transferability is concerned with explaining the research process in detail (Başkale, 2016; Çepni, Külcü & Kılıç, 2018; Lincoln & Guba, 2000; Miles & Huberman, 1994; Yıldırım & Şimşek, 2016). The selection of participants followed a criteria-based rationale while all stages of the research have been stated clearly, thus confirming the existence of a transferability strategy. Regarding the credibility strategy, the research was shared with an expert who has conducted similar studies in the finalization stage of the research; this expert also examined the research with regard to all its contexts. The expert mentioned that there was logical credibility across the literature review, method, findings, results and research problem. Besides, the expert was asked about the confirmability of themes and sub-themes determined as a result of raw data findings and researchers' analysis, as well as confirmability the themes and sub-themes obtained in light of participants’ opinions.

3. Findings

In this chapter, the findings obtained from the participant teachers via the content analysis are given.

Table 2. What does inclusive education mean to you?

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
<th>Frequency(f)</th>
<th>Percentage(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Views regarding inclusive education</td>
<td>Including all students in the educational environment</td>
<td>18</td>
<td>81.81</td>
</tr>
<tr>
<td></td>
<td>Including special education students in the educational environment</td>
<td>4</td>
<td>18.19</td>
</tr>
</tbody>
</table>

As seen in table 2, according to the results of the content analysis of answers to the first question, “What does inclusive education mean to you?”, under the theme “Views regarding inclusive education”, the sub-theme with the maximum frequency and percentage is “Including all students in the educational environment” (18 and 81.81%, respectively), while the sub-theme with the minimum frequency and percentage value is “Including special education students in the educational environment” (4 and 18.19%, respectively).

Here is a sample of teachers’ views regarding the themes:

"We should regard education as being inclusive for all. That is, it means the right to education for all children having difficulties in accessing educational, social, cultural and life-sustaining activities and opportunities, on equal terms with their peers.” (P20)

"It means including all students, children, with learning disabilities, being physically handicapped, being a refugee or having any other differences.” (P1)

"Inclusive education means that all children can attend education and training activities in the same environment regardless of their language, religion or ethnicity.” (P15)

"It means that children in need of special education can receive education in the same educational institution as their peers.” (P2)

"It means that physically and mentally handicapped children can receive education along with their peers.” (P21)
Table 3. What are your opinions regarding the necessity of inclusive education?

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think it is necessary</td>
<td></td>
<td>18</td>
<td>81.81</td>
</tr>
<tr>
<td>I think it is partially necessary</td>
<td>because of its constraints</td>
<td>3</td>
<td>13.63</td>
</tr>
<tr>
<td>I don’t think it is necessary</td>
<td></td>
<td>1</td>
<td>4.54</td>
</tr>
</tbody>
</table>

As seen in table 3, according to the content analysis results for the answers given to the Question 2, “What are your opinions regarding the necessity of inclusive education?” under the theme “Views regarding whether or not inclusive education is necessary”, the sub-theme with the maximum frequency and percentage is “I think it is necessary” (18 and 81.81%, respectively), while the sub-theme with the second-highest frequency and percentage value is “I think it is partially necessary because of its constraints” (3 and 13.63%, respectively) and the sub-theme with the lowest frequency and percentage value is “I don’t think it is necessary” (1 and 4.54%, respectively).

Below is a sample of teachers’ views regarding the themes:

“I find it necessary. The needs of all the students such as students with special needs or refugees should be satisfied without any discrimination in the educational environment.” (P3)

“I find it necessary since differences should not be obstacles for the individuals in receiving an education.” (P13)

“I think inclusive education is partially necessary. By saying partially, I mean this: the level of children’s disabilities affects whether inclusive education is completely necessary or unnecessary. For example, sometimes adaptation problems are experienced in education by refugee children and other children. Again, there are some problems in educating highly disabled children.” (P1)

“I don’t find it is necessary. I think that the children in need of special education should be educated in special classes on a one-for-one basis.” (P5)

Table 4. What do you think about the potential benefits of the inclusive education for students?

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
<th>Frequency (f)</th>
<th>Percentage(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think it is advantageous</td>
<td></td>
<td>4</td>
<td>18.18</td>
</tr>
<tr>
<td>I think it is disadvantage</td>
<td></td>
<td>5</td>
<td>22.72</td>
</tr>
<tr>
<td>I think it is both advantageous and...</td>
<td></td>
<td>13</td>
<td>59.09</td>
</tr>
</tbody>
</table>

As seen in table 4, according to the content analysis results for the answers given to the third question, “What do you think about the potential benefits of the inclusive education for students?” under the theme “Views regarding whether inclusive education is advantageous/disadvantageous”, the sub-theme with the maximum frequency and percentage is “I think it is both advantageous and disadvantageous” (4 and 18.18%, respectively), followed by “I think it is disadvantageous” (5 and 22.72, respectively); the sub-theme with the lowest frequency and percentage value is “I think it is advantageous” (13 and 59.09%, respectively).

Below is a sample of teachers’ views regarding the themes:

“It is both advantageous and disadvantageous. Its advantage is that the student has the opportunity to receive an education without being excluded and feeling different. Experiencing success not only socially but also academically with others makes them feel happier. I think disabled children and other students both benefit from this education. Enabling disabled individuals to adapt in the classroom is not as easy as expected, which is a disadvantage and this can affect both the teacher and the students negatively. Sometimes the students can exclude disabled individuals by mocking them about their disability.” (P21)
“It is both advantageous and disadvantageous. The advantages of inclusive education are that children aren’t excluded by receiving an education with their peers and that children learn to live by respecting each other’s rights. Its disadvantage is that, sometimes, they cannot understand each other in the classroom environment, which can lead to factors whereby they can be affected by each other in a psychologically negative way.” (P1)

“It is both advantageous and disadvantageous. As an advantage, the student can adapt herself/himself to society more easily and see herself/himself as a part of society. As a disadvantage, if it is not applied properly, the disabled individual can feel lonelier and deteriorate psychologically.” (P9)

“I find it disadvantageous. All the students with different aspects make it difficult to apply. That there are some expressions such as respecting sexual orientation differences is pathetic; it is unacceptable at any price. It means putting dynamite under the roots of society.” (P14)

“I find it advantageous. It is advantageous in terms of providing all students with access to an equal education.” (P6)

Table 5. How can inclusive education become more effective?

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggestions for improving</td>
<td>Students should be educated about the subject at a fundamental level</td>
<td>15</td>
<td>68.18</td>
</tr>
<tr>
<td>inclusive education</td>
<td>The school and the classroom should be prepared in the frame of inclusive education</td>
<td>4</td>
<td>18.18</td>
</tr>
<tr>
<td></td>
<td>Teachers should be trained in the subject</td>
<td>3</td>
<td>13.63</td>
</tr>
</tbody>
</table>

As seen in table 5, according to the content analysis of the answers given to the fourth question, “How can inclusive education become more effective?”, under the theme “Suggestions for improving inclusive education”, the sub-theme with the maximum frequency and percentage is “Students should be educated about the subject at a fundamental level” (15 and 68.18%, respectively), while the sub-theme with the second-highest frequency and percentage value is “The school and the classroom should be prepared in the frame of inclusive education” (4 and 18.18%, respectively). The sub-theme with the lowest frequency and percentage value are “The teachers should be trained about the subject” (3 and 13.63 %, respectively).

Below is a sample of teachers’ views regarding the themes:

“In order to make inclusive education more effective, students can be initially invited to take part in a self-knowledge activity so that they can feel empathy. This can make inclusive education more effective.” (P7)

“For inclusive education to be effective, I think that, primarily, such children should receive fundamental training, and then included in inclusive education after following up on their adaptation process.” (P1)

“In order to improve inclusive education, technical opportunities at schools should be utilized more properly and effectively, the physical environment should be adapted, guidance services should follow the children and update files on a daily basis, and parents should especially be offered training seminars.” (P9)

“Primarily, educators should made aware of and informed about this issue and educated accordingly.” (P3)
4. Conclusion and Discussion

Here, research results were evaluated in the frame of the current literature. In terms of what inclusive education means to them, the participants highlighted two sub-themes: including all students and including special education students in the educational environment. Regarding this point of view, the majority of participants (18 participants) mentioned that inclusive education is generally a perception aimed at including all students in the educational environment, while only four participants described it as only referring to the inclusion of students in need of special education in the educational environment. It can be seen that, for this question, participants were mainly supportive of the view that inclusive education should include all students in the educational environment. When the descriptions in the literature are reviewed, inclusive education used to emphasize the inclusion of students with special needs prior to the Salamanca declaration. Following this statement and in light of UNESCO’s initiatives, as well as the improvements that have taken place around the globe, the scope of inclusive education has widened to include all students with differences. In turn, Jenkinson (1997), Lewis and Doorlag (1999) have described inclusive education as supporting disabled students in communicating with society and their peers; this means that they are enabled to socially and educationally participate alongside their peers in the same classroom environment, with the educational methods allowing them to become self-sufficient and gain knowledge and skills. Meanwhile, Shaddock, Smyth, King, and Giorcelli’s (2007) research found that some countries only believe that children with disabilities should be included in inclusive education, but these researchers also explained how to resolve problems of children who suffer as a result of gender, poverty, behavior, culture, and immigration. Both and Ainscow (1998), UNESCO (2001), Simon, Echeita, Sandoval, and Lopez (2010) have described inclusive education as an approach enabling the potential learning of all students with differences, supporting them in receiving education alongside their peers in the classrooms.

Another result obtained from the research is concerned with participants’ views about whether inclusive education is necessary. Participants’ views were grouped according to the following sub-themes: “I think it is necessary”, “I think it is partially necessary because of its constraints” and “I don’t think it is necessary”. Based on these sub-themes, the majority of participants (18 participants) generally found inclusive education to be necessary, while only three participants mentioned that they find it partially necessary because of its constraints. A minority of participants (one participant) mentioned that inclusive education is not necessary. Concerning this question, participants were united in holding the view that inclusive education should embrace differences in the same school environment. Meanwhile, Tinklin, Riddell and Wilson (2004), Moriña, López-Gavirab and Morgadoc (2017) mentioned in their research that they found inclusive education necessary, while highlighting the limited range of physical opportunities, both at universities and in other educational institutions, as well as problems arising from the curriculum and the lack of equipped personnel. Ainscow and César (2006), Kozleski, Artiles, Fletcher and Engelbrecht (2009), Messiou (2017) emphasized that inclusive education is necessary and, in particular, that countries should develop policies for improving inclusive education.

Another outcome of this study is about whether participants find inclusive education to be advantageous or disadvantageous. The participants expressed the view that they find inclusive education both advantageous and disadvantageous. The majority of participants (13 participants) emphasized that the benefits or downsides of inclusive education are, in general, contingent on how it is applied. In addition, some of the participants (five participants) mentioned that education overall can be highly disadvantageous if it is not properly delivered. On the other hand, a minority of the participants (four participants) stated that inclusive education has so many advantages, even given the current mode of application. This finding is reflected in the literature. ERG (2006) in its research regarding school practices and teachers’ needs, emphasized that inclusive education will only succeed and offer an advantageous approach to education if it is applied properly, while stating that poorly designed education applications can lead to more downsides than benefits. Similarly, UNESCO (1994), Ainscow, Dyson and Weiner (2013) in their respective research compared schools created in the frame of inclusive education with all other types of schools, finding that, even if the latter are more costly, they lead to greater productivity in education and provide everyone with an equal and effective education.

Another outcome from the research concerns the participants’ opinions about how to make inclusive education more effective. Here, participants were united around three sub-themes: students should be educated about the subject at a fundamental level; the school and the classroom should be prepared in the
frame of inclusive education, and teachers should be trained about the subject. Starting from this point of view, the majority of the participants (15 participants) supported the idea that students from disadvantaged groups and other peers should receive fundamental training on this issue in order to improve inclusive education, while some participants (four participants) mentioned that the school and classroom environments should be organized in the frame of inclusive education in order to improve the concept’s efficacy. A minority of participants (three participants) expressed that, primarily, teachers who are the implementers of this approach should be informed regarding the issue by providing them with training for improving inclusive education. The majority of the participants agreed that students from disadvantaged groups and other peers should be educated regarding this issue, while the literature especially focuses on improving teachers’ competence and school opportunities in the frame of inclusive education. Meanwhile, ERG (2006) in its research, obtained findings based on teachers’ opinions as follows: they think that the curriculum flow should be flexible in order to enable teacher-student interaction; if there are disadvantaged students in the classroom, some teachers will internalize discrimination and they need to be won over to supporting inclusive education; teachers have experienced different kinds of discrimination in their schools related to religion, ethnicity, gender, disability, health, and poverty. At the same time, Ainscow (2005), Rouse (2008), Moriniña (2017) emphasized in their research the fact that teachers’ needs and education should be realized systematically and that their attitudes, beliefs, and self-sufficiency should be improved. Meanwhile, Tinklin, Riddell, and Wilson (2004), Ainscow, Dyson and Weiner (2013) opined that physical opportunities at current schools should be reformed; otherwise, inclusive education will not be able to achieve its goal. These following suggestions should be implemented, depending on the results:

1. Teachers should attend in-service education activities on inclusive education
2. Students should be provided with informing regarding inclusive education
3. Families should be provided with information regarding inclusive education,
4. The effectiveness of inclusive education should be increased by improving schools’ physical opportunities in the frame of inclusive education
5. Regarding the generalization of inclusive education, countries, politicians, non-governmental organizations and schools should create awareness by carrying out activities to increase awareness in society.

References


Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook (2nd ed.). USA: SAGE.


Şimşek, Ü. (2017). Examination of the social studies curriculum as part of inclusive education. VI. International Symposium On Social Studies Education, Anadolu University, Eskişehir, Turkey.


A Review of the Graduate Theses on Gaming Addiction in Turkey

İbrahim Taş

İstanbul Sabahattin Zaim Üniversitesi

ARTICLE INFO

Article History:
Received 08.08.2019
Received in revised form 25.08.2019
Accepted 10.09.2019
Available online 30.09.2019

ABSTRACT

Gaming addiction is attracting the attention of more and more researchers every day. Diagnostic criteria defined by World Health Organization (WHO) and American Psychiatric Association (APA) for gaming disorder or internet gaming disorder have caused a rapid increase in the number of studies on the subject. A similar case applies to the studies conducted in Turkey. Regarded as a type of behavioral addiction, gaming addiction is observed in almost every group while it affects children and adolescents in particular. Affecting a wide range of people, gaming addiction can be seen as one of the problems of future because daily life is becoming more technological. This study accordingly aimed to review gaming addiction in graduate theses in Turkey. The research used the document analysis method of qualitative research methods, and the research sample composed of 28 graduate theses. It was found in the research that the studies started to increase after 2013, and the actual concentration was seen in 2018. The research studies were conducted primarily on children and adolescents followed by young and adult groups. It was found that the most used research design was the quantitative research design and none of the studies utilized the qualitative research design on its own. The most used research model was the survey model, and the correlation analysis was found to be the most used data analysis technique. It was also observed in the research that gaming addiction was studied along with both negative concepts such as depression, anxiety, somatization, and obesity and positive concepts such as self-regulation, subjective happiness, satisfaction with life, and social support.

Keywords:¹ Gaming addiction, graduate education, document analysis

© 2019 IJPES. All rights reserved

1. Introduction

Technological developments have impacted the humankind’s life deeply, changing their lifestyles. Computers, internet and internet applications are renewing and improving themselves every day, leaving their mark on life and creating different opportunities. Several needs such as shopping, entertainment, socialization which would be met within social life in the past can now be met with different applications via internet at home without even going outside. As the number of needs met via internet increases, individuals are now imprisoned at home and drift away from social life even further. A need of individuals which changes along with technological developments is entertainment. Traditional games that used to be played on streets have now been replaced by new games in the virtual world.

Games support child’s mental, physical and emotional development (Egemen, Yılmaz, & Akıl, 2004) and help the child integrate his/her inner world with social life (Başal, 2007). As well as being important for children’s development, games are great tools of entertainment for adults. However, quality of games has evolved today, and traditional games have been greatly replaced by digital games. Especially the limitless and interactive space that online games offer individuals makes them very popular among them (Liu, & Chang, 2016). The

¹ Corresponding author’s address: Istanbul Sabahattin Zaim University
Telephone: 5304439541
e-mail:ibrahimtas34@gmail.com
http://dx.doi.org/10.17220/IJPES.2019.03.005
fact that digital games are more attractive than traditional ones and address several areas of sense at the same
time brings about the intensive use of games. Intensive use of games may be problematic. So, digital game
addiction manifests itself as a problem. Gaming addiction, which was controversial at the very beginning as
it is a type of behavioral addiction and does not involve the intake of a chemical substance (Speakman, Konijn,
Roelofsma & Griffiths, 2013) seems to be out of the focus of the debates with the publication of Diagnostic and
Statistical Manual of Mental Disorders (DSM V) by the American Psychiatric Association (APA, 2013). Internet
gaming addiction is handled within nine criteria in DSM V. This criteria include “constant preoccupation with
internet games (thinking about the game, participants of the game, next games; gaming being the most
dominant activity of daily life), withdrawal symptoms when gaming is taken away or not possible (sadness,
anxiety, irritability), tolerance (spending more time gaming gaming), inability to reduce playing, unsuccessful
attempts to quit gaming, loss of interest in everything except internet games (in previously enjoyed activities
due to gaming), continuing to game despite the psychosocial problems, deceiving family members or others
about the amount of time spent on gaming, the use of internet games to relieve negative moods, having
jeopardized or lost an important relationship, job or an opportunity about education or career due to internet
games” (APA, 2013, p.795).

Another development about the recognition of gaming addiction is that the World Health Organization
(WHO, 2018) recognized gaming disorder as a mental health problem in International Classification of
Diseases (ICD 11). WHO (2018) states that the following three criteria need to be met for at least 12 months so
that the individual can be diagnosed with gaming disorder: “impaired control over gaming (e.g., onset,
frequency, intensity, duration, termination, context), increasing priority given to gaming to the extent that
gaming takes precedence over other life interests and daily activities, continuation or escalation of gaming
despite the occurrence of negative consequences. The behavior pattern is of sufficient severity to result in
significant impairment in personal, family, social, educational, occupational or other important areas of
functioning.”

With both organizations having declared the criteria, it can be argued that there have been fewer debates on
the criteria related to gaming addiction. One can argue that future discussions will be on the causes of gaming
addiction, and its intensity, frequency and the areas it affects. It is observed that gaming addiction has been
conceptualized in different forms such as digital game addiction, video game addiction, computer gaming
addiction, and internet gaming addiction in the literature. According to the research studies in the literature,
gaming addiction is positively correlated with attention deficit hyperactivity disorder, depression, anxiety and
obsessive-compulsive disorder (Andreassen et. al., 2016), shyness (Ayas, 2012), aggression (Çankaya & Ergin,
2015), video gaming duration (Gökçearslan & Durakoğlu, 2014), attention deficit hyperactivity disorder and
depressive mood (Hyun et al., 2015), anxiety (Kim, Hughes, Park, Quinn, & Kong, 2016), trait anxiety (Mehroof
& Griffiths, 2010) and social anxiety (Yıldız, Tüfecki & Aksu, 2016; Karaca et al., 2016) and negatively
related with emotional regulation and school engagement (Liu et al., 2017) and emotional regulation
(Ulüm, 2016).

It is understood from the studies in the literature that gaming addiction affects individuals in several areas
including mental health, socialization and emotion. Further digitalization of daily life gives the idea that this
problem will even worsen in the future. In recent years, there have been many studies on the review of
graduate theses in Turkey (Alpaydın & Erol, 2017; Ateseven & Oğuz, 2015; Güngören, Erdoğan & Ayas, 2018;
Koç, 2016; Tosun Sümêr and Güven, 2018). However, no study was observed on gaming addiction. The fact
that gaming addiction has an impact on a wide range of groups including children and adolescents makes this
study important. The review of graduate theses on gaming addiction in Turkey would provide information
on the aspects of the concept (research frequency, associated variables, sample, etc.).

1.1. Purpose of the Research

This research aimed to review gaming addiction, which is becoming a global problem, in graduate theses in
Turkey. While providing information on matters such as on which samples gaming addiction has been
studied, with which concepts it is associated, and in which years it has been studied intensively, the research
also aimed to give an idea for future studies. To this end, answers were sought to the following questions:

What are the descriptive statistics of theses on gaming addiction?
On which sample groups has gaming addiction been studied?
With which designs, models and data analysis techniques has gaming addiction been investigated?
With which concepts has gaming addiction been studied and what results have been achieved?

2. Method

Investigating the gaming addiction in graduate theses in Turkey, this study utilized the document analysis method of qualitative research methods. Document analysis refers to the analysis of written documents that involve information on phenomena and events about the studied subject and to reaching the data that need to be obtained (Karataş, 2013).

The research sample was composed of all graduate theses that were conducted in Turkey between 2010 and 2018 and that were available. Key concepts of Digital Game Addiction, Computer Game Addiction, Gaming Addiction, Online Gaming Addiction, and Video Game Addiction were entered in the Higher Education Council (YÖK) National Thesis Center search engine, and 30 graduate theses were accessed. Since two theses had no access permit, the analyses were performed on 28 theses. The following is the distribution of the accessed theses by universities: Bahçeşehir University (6), Üsküdar University (2), Haliç University (2), FSM Vakf University (2), Niğde University (2), Sakarya University (2), Aydın Adnan Menderes University (1), Tokat Gazi Osmanpaşa University (1), Fatih University (1), Beykent University (1), Van Yüzüncü Yıl University (1), Hasan Kalyoncu University (1), Kafkas University (1), Nişantaşı University (1), Kocaeli University (1), Gazi University (1), Ordu University (1), and Marmara University (1).

Accordingly, it is seen that the highest number of theses on gaming addiction were published at Bahçeşehir University with 6 theses, and other universities were close to each other in numbers. The concept of gaming addiction was utilized in this study instead of all other concepts.

2.1. Data Analysis

The graduate theses were subjected to the document analysis in the research. Accordingly, information was provided on the level of graduate, year, sample groups, methods used, subjects studied, and results achieved concerning the theses on gaming addiction. Socio-demographic variables were not examined in this study.

3. Results

In this section, the statistical data are addressed in the first place. 28 graduate theses written on gaming addiction between 2010 and 2018 were reviewed in this research. Of the theses, 26 were postgraduate theses, 1 was doctoral dissertation, and 1 was specialization in medicine thesis. The distribution of the theses by years is shown in Table 1.

<table>
<thead>
<tr>
<th>Years</th>
<th>Postgraduate</th>
<th>Doctoral</th>
<th>Specialization in Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2013</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2014</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2015</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2016</td>
<td>3</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>2017</td>
<td>2</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>2018</td>
<td>16</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

According to Table 1, the studies on gaming addiction are fairly recent. It is seen that the studies began as recent as in 2010 and the concentration occurred in 2018. While the number of studies conducted between 2010 and 2018 was 12 (43), 16 (27%) theses were written in 2018 alone. Table 2 presents the distribution of the theses by sample groups.
Table 2. Sample groups of the graduate theses

<table>
<thead>
<tr>
<th>Sample Group</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary School</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Secondary School</td>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td>High School/Adolescent</td>
<td>6</td>
<td>21.4</td>
</tr>
<tr>
<td>University</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Student-Parent Mixed</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Undergraduate and Graduate</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Gifted Students Aged between 8 and 12 years and their Teachers</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Between the Age of 10 and 19 years</td>
<td>4</td>
<td>14.3</td>
</tr>
<tr>
<td>Between the Age of 12 and 65 years</td>
<td>2</td>
<td>7.1</td>
</tr>
</tbody>
</table>

According to Table 2, gaming addiction has been studied on different samples. The studies seem to be concentrated on children and adolescents. Of the studies, 18 (64%) were on children and adolescents aged between 10 and 19 years, 5 (18%) were on undergraduates, and 5 (18%) were on mixed groups. The data on which designs and models the graduate theses utilized are given in Table 3.

Table 3. Design and model of the graduate theses

<table>
<thead>
<tr>
<th>Design used</th>
<th>Model used</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>Quantitative</td>
<td>Survey</td>
<td>26</td>
<td>93</td>
</tr>
<tr>
<td>Mixed</td>
<td></td>
<td>1</td>
<td>3.6</td>
</tr>
</tbody>
</table>

According to Table 3, of the studies, 27 (96.4%) were conducted in the quantitative research design while 1 (3.6%) used the mixed research design (qualitative-quantitative). It was observed that no study was conducted with the qualitative research method. The techniques used in the data analysis are given in Table 4.

Table 4. Data analysis techniques used by the theses

<table>
<thead>
<tr>
<th>Analysis technique*</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>19</td>
</tr>
<tr>
<td>ANOVA</td>
<td>18</td>
</tr>
<tr>
<td>t test</td>
<td>18</td>
</tr>
<tr>
<td>Mann-Whitney U</td>
<td>10</td>
</tr>
<tr>
<td>Kruskal-Wallis H</td>
<td>5</td>
</tr>
<tr>
<td>Regression</td>
<td>4</td>
</tr>
<tr>
<td>Chi-square</td>
<td>3</td>
</tr>
<tr>
<td>Confirmatory factor analysis</td>
<td>2</td>
</tr>
<tr>
<td>Exploratory factor analysis</td>
<td>2</td>
</tr>
<tr>
<td>Mediation model</td>
<td>1</td>
</tr>
<tr>
<td>MANOVA</td>
<td>1</td>
</tr>
<tr>
<td>Covariance (ANCOVA)</td>
<td>1</td>
</tr>
<tr>
<td>Wilcoxon Signed-Rank Test</td>
<td>1</td>
</tr>
</tbody>
</table>

As seen in Table 4, the theses used correlation (19), ANOVA (18), t test (18), Mann-Whitney U (10), Kruskal-Wallis H (5), regression (4), chi-square(3), Confirmatory Factor Analysis (2), Exploratory Factor Analysis (2), Mediation Model (1), MANOVA (1), ANCOVA (1), and Wilcoxon (1) techniques, respectively. Accordingly, the most used analysis technique in the theses is correlation, and the least used techniques are ANCOVA, MANOVA, mediation model and Wilcoxon Signed-Rank Test. Table 5 shows with which concepts gaming addiction has been studied and what results have been achieved in the graduate theses in the sample.
<table>
<thead>
<tr>
<th>Name of thesis</th>
<th>Variables</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erboy, 2010</td>
<td>Alienation from School</td>
<td>Alienation from school predicts computer game addiction.</td>
</tr>
<tr>
<td>Kaya, 2013</td>
<td>Scale development</td>
<td>A valid and reliable scale was developed.</td>
</tr>
<tr>
<td>Hazar, 2014</td>
<td>Level of participation in sports</td>
<td>It was found that the participants with high level of participation in sports had high levels of gaming addiction.</td>
</tr>
<tr>
<td>Topşar, 2015</td>
<td>Emotional intelligence.</td>
<td>Emotional intelligence was found positively correlated with gaming addiction.</td>
</tr>
<tr>
<td>Durna, 2015</td>
<td>Executive functioning, response inhibition and emotional memory, aggression, empathy, personality, depression, anxiety and satisfaction with life</td>
<td>Violent games adversely affect executive functioning and response inhibition. Psychoticism, aggression, and desire and urge to gaming was found higher in the risky and addicted group.</td>
</tr>
<tr>
<td>Musluoğlu, 2016</td>
<td>Attachment styles</td>
<td>Attachment styles predict gaming addiction.</td>
</tr>
<tr>
<td>Odabaşı, 2016</td>
<td>Subjective happiness</td>
<td>A negative correlation was found with subjective happiness.</td>
</tr>
<tr>
<td>Zekihan Hazar, 2016</td>
<td>Effects of games involving physical mobility (experimental)</td>
<td>Games involving physical mobility decreased gaming addiction scores.</td>
</tr>
<tr>
<td>Balak, 2016</td>
<td>Somatization and Theory of Mind (Reading the mind in the eyes)</td>
<td>A positive correlation with somatization and a negative correlation with reading the mind in the eyes was found.</td>
</tr>
<tr>
<td>Eni, 2017</td>
<td>Perceived parental attitude</td>
<td>A positive correlation with authoritarian and over-protective parental attitude and a negative correlation with democratic attitude was found.</td>
</tr>
<tr>
<td>Karagöz, 2017</td>
<td>Family attitudes, time spent on internet, type of game, purpose of using internet, family-child internet addiction</td>
<td>Family attitudes found to have no correlation. A positive correlation was found between family-child internet addiction and time spent on internet, strategy video games, and using internet for gaming. Characteristics of gaming addicted families: It is observed that there is less attention, they feel helpless in the face of the adversities of technology and prohibit technology, experience communication problems with their children and apply mild and severe violence. Characteristics of non-gaming addicted families: It is observed that they are extended families, there is a peaceful family environment, there are no absolute prohibitions but certain rules, desired technological tools are not bought right away, the games played are limited.</td>
</tr>
<tr>
<td>Yiğit, 2017</td>
<td>Family characteristics</td>
<td>Characteristics of gaming addicted families: It is observed that there is less attention, they feel helpless in the face of the adversities of technology and prohibit technology, experience communication problems with their children and apply mild and severe violence. Characteristics of non-gaming addicted families: It is observed that they are extended families, there is a peaceful family environment, there are no absolute prohibitions but certain rules, desired technological tools are not bought right away, the games played are limited.</td>
</tr>
<tr>
<td>Derici, 2018</td>
<td>Emotional memory and psychological factors</td>
<td>A positive correlation with depression, anxiety and aggression and a negative correlation with empathy was found. No significant difference was found in terms of emotional memory.</td>
</tr>
<tr>
<td>Bekâr, 2018</td>
<td>Attention deficit hyperactivity disorder</td>
<td>A positive correlation was found with attention deficit hyperactivity disorder.</td>
</tr>
<tr>
<td>Author, Year</td>
<td>Research Area</td>
<td>Findings</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Aktaş, 2018</td>
<td>Psychological resilience, aggression</td>
<td>A negative correlation with psychological resilience and a positive correlation with aggression was found.</td>
</tr>
<tr>
<td>Orhan, 2018</td>
<td>Physical activity, level of attention</td>
<td>A negative correlation with physical activity and level of attention</td>
</tr>
<tr>
<td>Şahin, 2018</td>
<td>School social behaviors of gifted students</td>
<td>A negative correlation with school social behaviors</td>
</tr>
<tr>
<td>Çakıcı, 2018</td>
<td>Anger expression styles</td>
<td>A positive correlation with anger expression subscale</td>
</tr>
<tr>
<td>Yılmaz, 2018</td>
<td>Effects of violent video games on working memory</td>
<td>Reduction in P300 amplitude values and delay in latency values were found. In other words, inadequacy was found in evaluating and deciding and allocation of attention.</td>
</tr>
<tr>
<td>Ücan, 2018</td>
<td>Perceived social support</td>
<td>A negative correlation was found with perceived social support.</td>
</tr>
<tr>
<td>Aksel, 2018</td>
<td>Self-regulation and social tendencies</td>
<td>A negative correlation was found between gaming addiction and “self-regulation failure” and “self-regulation success” subscales of self-regulation abilities skills. A positive correlation was found between gaming addiction and “violence tendency” subscale of social tendencies scale.</td>
</tr>
<tr>
<td>Balıkçı, 2018</td>
<td>Aggressive behaviors</td>
<td>A positive correlation was found between online gaming addiction and physical aggression, anger, hostility, verbal aggression and aggression of aggressive behaviors.</td>
</tr>
<tr>
<td>Büdük, 2018</td>
<td>Obesity level</td>
<td>It was not found correlated with body-mass index.</td>
</tr>
<tr>
<td>Bekir, 2018</td>
<td>Emotional schemas and agentic personality</td>
<td>It was found that uncontrollability, weakness against emotions, comprehensibility, desire of rationality, rumination, difference, denial of emotions, approval, finding emotions harmful, acceptance of emotions, consensus and guilt predicted gaming addiction by 52%. No correlation was found between gaming addiction and agentic personality.</td>
</tr>
<tr>
<td>Kurtbeyoğlu, 2018</td>
<td>Demographics</td>
<td>Gaming addiction was found higher among males. Gaming addiction differs significantly by family income level, gaming duration, frequency of digital game purchase, reasons for gaming, type of gaming device (desktop, smartphone) and type of game (action, adventure, sports).</td>
</tr>
<tr>
<td>Dönmez, 2018</td>
<td>Conscious awareness and satisfaction with life</td>
<td>Conscious awareness and satisfaction with life predict gaming addiction negative significantly. Conscious awareness was found to be a partial mediator in the relationship between satisfaction with life and gaming addiction.</td>
</tr>
<tr>
<td>Aksoy, 2018</td>
<td>Lifestyle behaviors</td>
<td>A negative correlation was found between gaming addiction and “interpersonal relationships” and “stress management” subscales of lifestyle.</td>
</tr>
<tr>
<td>Kasap, 2018</td>
<td>Visuo-spatial memory</td>
<td>No effect was found on visuo-spatial memory.</td>
</tr>
</tbody>
</table>
According to Table 5, gaming addiction were studied with different variables. It is seen that gaming addiction has been studied both with negative variables such as alienation from school, somatization, obesity, depression, anxiety, aggression and emotional schemas and positive variables such as satisfaction with life, social support, lifestyle behaviors, conscious awareness, demographics, self-regulation, sports and physical activities, emotional intelligence, subjective happiness, cognitive psychology (memory, attention, evaluation, visuo-spatial memory). The concept has also been studied with variables including personality and attachment styles. In the light of these variables studied with gaming addiction, one can argue that the concept has been studied broadly.

4. Discussion and Conclusion

It is seen that gaming addiction has been studied with concepts of different disciplines and on different populations. In recent years, there have been many studies on the review of graduate theses in Turkey (Alpaydin and Erol, 2017; Ataseven and Oğuz, 2015; Güngören, Erdoğan and Ayas, 2018; Koç, 2016; Tosun Sümer and Güven, 2018). However, no study reviewing graduate theses on gaming addiction was observed, which makes reviewing the theses performed on gaming addiction important. This research aimed to review studies which were conducted on game addiction in Turkey between 2010 and 2018. To this end, 28 theses were reviewed in terms of their years, universities, research designs, models and data analysis techniques, variables studied, and results achieved.

Firstly, the descriptive statistics of the theses were handled in the research, and it was observed that the theses were mainly postgraduate theses, and there was an accumulation of studies in 2018. One doctoral dissertation and one specialization in medicine thesis was observed. How gaming addiction has been studied mainly in postgraduate theses might be because it is a quite new field. It is seen that the studies started increase as of 2013, and only one study had been carried out before. Increased number of studies as of 2013 can be attributed to the inclusion of internet gaming disorder in Section III of the Diagnostic and Statistical Manual of Mental Disorders (DSM V, 2013) by the American Psychiatric Association (APA, 2013). This means that it can be accepted as a diagnosis if sufficient number of studies are performed on internet gaming disorder. DSM V set nine criteria about addiction to gaming, preventing the diagnostic problems. It is seen that majority of the studies were performed in 2018. 2018 is also the year when World Health Organization (WHO, 2018) recognized gaming disorder as a mental health problem in the International Classification of Diseases (ICD 11). WHO similarly set certain diagnostic criteria and came up with a diagnosis according to these criteria. Both developments having eliminated the uncertainty about diagnostic criteria might have caused an increase in the number of studies on gaming addiction.

Another matter investigated in the research was on which samples the studies on gaming addiction were conducted most. As observed in the research, while the studies were on a wide range of groups (children, adolescents, undergraduates, adults), majority of them were conducted on children and adolescents. Adolescence is a period during which adolescents look for their identity, what to value, what goal to pursue and whom to attach to (Yavuzer, 2002). Since this is a searching period, there are lots of emotional fluctuations and younger ages are a risk factor for addiction in general (Demirtaş Madran and Ferliğül Çakılcı, 2014), children and adolescents are a significant target group for gaming addiction. There are certain factors which make games attractive for children and adolescents. Some of the factors include the fact that adolescents can gain prestige and meet the need for self-actualization via games (Li and Wang, 2013), that games are important tools of entertainment for children (Çakır, 2013), that their visual effects and action are attractive for children (İçibçaşi, 2011), and games are based on interaction and have an aspect of communication (Gürcan, Özhan and Uslu, 2008). Given developmental characteristics of children and adolescents and the features of games altogether, gaming addiction is a severe risk factor for this period in particular. This justifies the fact that the studies have been concentrated on children and adolescents. What can be concluded from the studies having focused on different groups such as undergraduates and adults is that it may affect a wide range of groups although children and adolescents are mainly affected by the concept.

Another finding achieved in the research was in which designs the graduate theses were carried out. The most preferred design was found to be the quantitative research design. While no study in the qualitative research design was observed, only one study was performed in the mixed (qualitative-quantitative) design. Similarly, the studies conducted by Horzum and Ayas (2017) reviewing the articles on cyberbullying in Turkey, Arık
and Türkmen (2009) reviewing the articles published in educational sciences journals and the meta-evaluation carried out by Yılmaz (2017) on the organizational power studies in Turkey observed that the quantitative research methods were used more. It can be said that this research finding coincides with the findings achieved in the literature. Although quantitative research methods have been the single source of information in the fields of social sciences and education with their generalizability for a long time, it has been noticed that quantitative methods fall insufficient in explaining educational phenomena and events and are not directing enough in practices in the field of education (Yıldırım, 1999). Whereas assessment and generalizability in studies on gaming addiction are important, it is also important to achieve results for practitioners who want to cope with this problem. Hence, it is critical to use the qualitative research methods which allow for in-depth and flexible research in the context to which phenomena are related (Yıldırım, 1999). Quantitative research methods having been greatly used gaming addiction studies can be regarded as a limitation.

Another finding of the research is the data analysis techniques most frequently used in the studies. Accordingly, the most used techniques in the theses were difference tests, correlation and regression. In the literature, it is also observed in the studies in educational and social sciences (Erdem, 2011; Horzum and Ayas, 2017; Yılmaz, 2017) that correlation, regression and difference tests and factor analysis are rather used. This result is in parallel with the most used research design mentioned above. Qualitative research design being the most used designed also had its effects on data analysis techniques. In other words, these analysis techniques are the natural outcome of the research designs used.

Another finding to be achieved in the research was with which concepts gaming addiction was studied in the graduate theses. In the research, it is seen that gaming addiction has been studied with both negative and positive variables and neutral variables. The fact that the concept has been studied with negative variables such as alienation from school, somatization, obesity, depression, anxiety, aggression and emotional schemas is important for identifying the concomitant psychosocial problems. In coping with gaming addiction, it is important to study with factors that accompany or trigger gaming addiction for the treatment plan to achieve its goal. On the other hand, studying the concept with positive variables such as satisfaction with life, social support, conscious awareness, self-regulation, sports and physical activities, emotional intelligence and subjective happiness is important for identifying the variables that prevent the formation of game addiction. Since gaming disorder is perceived as a mental health problem (WHO, 2018), studying the variables that will help cope with or prevent this problem will also contribute to the preservation of mental health. The concept has also been studied with variables of both positive and negative characteristics such as personality and attachment styles. These variables that have been studied with gaming addiction are important in terms of assessment.

Consequently, among the graduate theses performed in Turkey between 2010 and 2018, the ones that could be accesses were reviewed and analyzed with document analysis. One of the limitations of the study is that not all graduate theses could be accessed as some authors did not allow access to their theses. Another limitation is the lack of results regarding the sociodemographic variables discussed in the theses. Since these variables have been addressed in almost all the theses written in Turkey, their investigation would pave the way for quite a widening of the scope of any study. These variables were not included in the research because they are subject matters on their own.

Some limitations were found in regard to the theses in the research. The theses seem to have reached quantitative research data in general. This poses a limitation in terms of obtaining in-depth information. In quantitative studies, experimental studies were found to be almost non-existent. This will create a great limitation in the development of programs for coping with gaming addiction. The emphasis on qualitative and mixed studies in future studies is important for understanding the phenomenon. Experimental studies of quantitative research methods and structural equation modeling based on theoretical background can be utilized. Future studies can investigate gaming addiction in terms of sociodemographic variables.

References


Secondary School Students’ Attitudes towards the Concept of Equality and Preservice Teachers’ Professional Noticing

Seval Deniz Kılıç1, Ercan Masal2

1 Muğla Sıtkı Koçman University, Faculty of Education, Muğla, Turkey
2 Sakarya University, Faculty of Education, Sakarya, Turkey

ARTICLE INFO

Article History:
Received 06.07.2019
Received in revised form 03.08.2019
Accepted 19.08.2019
Available online 30.09.2019

ABSTRACT

With the understanding of importance of pedagogical content knowledge, professional noticing has become one of the research subjects of the mathematics educators for the last 10 years. This qualitative study which explores secondary school students’ solution processes regarding the concept of equation, one of the main components of algebraic learning field and the preservice teachers’ noticing about this is quite rich in terms of its results. The 6th, 7th, and 8th graders’ attitudes towards equations were revealed and it was found as stated in literature that students were dominantly “computational thinkers”. However, the differences in this general concept of thinking seem to make contribution to literature by involving discrete attitudes. In addition to this, the secondary findings of the study include some evidence revealing that pre-service teachers’ level of noticing accumulates at middle levels but they can be improved.

Keywords:
equal sign, equations, relational thinking, preservice teacher noticing

1. Introduction

The algebraic learning field accepted as the gate keeper in mathematics education in the world (National Research Council [NRC], 1998) started to take part more in education curricula due to the re-design of the curricula in Turkey (MEB, 2005). The basic concept for every level of algebra education is the concept of equality and equal sign (Martha W. Alibali, Eric J. Knuth, and Shanta Hattikudur, 2017). Especially, during the transition from arithmetic to algebra, correct interpretation of equality makes this transition process easy (Kieran, 1981; Knuth, Stephens, McNeil, & Alibali, 2006; MacGregor & Stacey, 1997). Before the symbolic introduction of the equal sign, it is known that students can use the equal sign without its symbolic meaning and this develops their problem solving skills (Sherman & Bisans, 2009; Driver & Powell; Alibali, Knuth, & Hattikudur, 2007). Despite its importance, the studies reveal that teachers and preservice teachers fail to notice their students’ relational thinking approaches and the misconceptions they exhibit (Asquith, Stephens, Knuth, & Alibali, 2007; Stephens, 2006) and most secondary school teachers do not care these subjects (Falkner, Levi & Carpenter, 1999; Knuth et al., 2006). In addition to this, it is emphasized in the studies carried out that teachers and preservice teachers’ knowledge about the students’ perception of equality is important to make correct educational decisions (Carpenter, Franke & Zeringue, 2005; Matthews, Rittle-Johnson, McEldon & Taylor; 2013, Knuth et al., 2006). Thus, it will be significant to determine how teachers and prospective teachers evaluate the solutions and approaches. This study, using the framework of noticing, will explore the student attitudes towards the concept of equality through the eyes of the preservice teachers.

1 Corresponding author’s address: Muğla Sıtkı Koçman University, Faculty of Education, Muğla, Turkey

e-mail: deniz.k12@hotmail.com

http://dx.doi.org/10.17221/186.2019-03.0106

© 2019 International Journal of Psychology and Educational Studies (IJPES) is supported by Educational Researches and Publications Association (ERPA)
1.1. Theoretical Framework

Noticing of Preservice Teacher

Teacher noticing, one of the subject matters paid attention by the mathematics educators in the last ten years (Schack, Fisher, & Wilhelm, 2017; Sherin, Jacobs, & Philipp, 2011), can refer to doing observations and noticing some points to understand the world (Sherin and et al., 2011). However, this process of noticing becomes meaningful after some professional skills and provides special awareness for the field of study (Goodwin, 1994). The concept of noticing in mathematics courses was first discussed by Mason (2002) and included the concepts “what will be noticed first” and “what will be reflected retrospectively”. Classroom is a complex environment and many learning activities are actualized at any time. Thus, it is important that teachers must develop a specific point of view about the learning environment and determine what is considerable. When a student solves a question and makes an explanation, the teacher must analyse these processes and give feedback to his/her student. The feedback must include more than “yes” or “no” (Ball, 1990) because the teacher’s ability to recognize his/her student’s mathematical thinking requires more than seeing what is true or false about his/her student’s answers (Callejo & Zapatera, 2017).

The components of the structure introduced by Mason (2002) and developed by Van Es and Sherin (2002) include the following:

“a) identifying what is important in a teaching situation; (b) making connections between specific events and broader principles of teaching and learning (c) using what one knows about the context to reason about a situation”.

This process of noticing became more detailed with the contributions made by Jacobs, Lamb, and Philipp (2010) and included three constructs: attending, interpreting, and responding. The first component, that is attending, involves teacher’s identifying mathematical strategies used by his/her student. Interpreting means to analyse student’s strategies in detail and discuss them in terms of important components. Responding, the last component, involves teachers’ guidance to ameliorate the existing state.

Mason (2002), Van Es & Sherin (2002) and Jacobs et al. (2010) based their studies on general observation of classroom events, but this study rather than in-class observations explores a specific case via clinical interviews rather than in-class observations as with the studies carried out by Van den Kieboom, Magiera and Moyer (2017).

There are many studies in literature exploring the teachers and pre-service teachers’ noticing of different subjects (e.g. Schack, Fisher, Thimas, Eisenhardt, Tassell & Yoder, 2013; Bartell, Webel, Bowen & Dyson, 2013; Van den Kieboom, Magiera, & Moyer, 2017; Callejo & Zapatera, 2017; Fernández, Llinares & Valls, 2012). This study specifically explored preservice teachers’ noticing of the concept of equality, one of the main components of algebra, in terms of student thinking.

1.2. Student Thinking About the Equal Sign

According to the studies carried out about students’ understanding and perceptions of equal sign Alibali, 1999; Falkner, Levi, & Carpenter, 1999; Kieran, 1981; McNeil & Alibali, 2005), it is revealed that students interpreted the equal sign as an “operator signal”. For example, in the equation of 5+4 = 9, some students say that 9 should go into the box; on the other hand, there are some students who say that the equation beginning with the unknown as in □+5=4 cannot be solved. This case results from the fact that students usually view the equality as a sign which separates the quantities on both sides. In fact, in order to construct the meaning of equal sign correctly, it is important to explain that equality represents the sameness on both sides of the quantities (Carpenter et al., 2003; McNeil & Alibali, 2005). In this stage, discussing equality as a relationship makes sense. Relational thinking is an approach investigating the relationship between the quantities by using the properties of equality, numbers, and operations rather than following a sequence of procedures to solve an equation (Carpenter, Levi, Franke, & Zeringue: 2005). In the light of the relevant literature, Van den Kieboom and et. al. (2017) summarize student thinking process about the concept of equal sign from simple to complex as in Table 1.
Table 1. Student Thinking about the Equal Sign

<table>
<thead>
<tr>
<th>Thinking Type</th>
<th>Sample student attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid Operational Thinking (ROT)</td>
<td>Students regard the equal sign as an operator and focus on finding the result. In the expression of “□-5+4”, the number that goes into the box cannot be calculated because the unknown should come after the equal sign “.” “With the expression of 5+4 □+11, we add 5 and 4 and write 9 into the box and then add 9 and 11 and the result is 20”</td>
</tr>
<tr>
<td>Flexible Operational Thinking (FOT)</td>
<td>Students regard the equal sign as an operator but they do not pay attention if the equal sign is either to the left or right of the equation. “With the expression of □-5+4 or □+5+4, 9 goes into the box. It is not important if the box comes before the equal sign.”</td>
</tr>
<tr>
<td>Computational Thinking (CT)</td>
<td>Students know that the equal sign on both sides of the equation refers to the equality of numbers. In order to find the unknown number, they add the numbers on both sides and compare them. “With the expression of 15+4 □, if you add 15 and 4, you get 19. Because the right side is equal to the left side, 8 must go into the box to get 19.”</td>
</tr>
<tr>
<td>Relational Thinking (RT)</td>
<td>Students recognise that the equal sign represents equivalence between the two sets of quantities and compare the quantities on both sides of the equation without calculating them. “With the expression of 15+4 □+11, both sides must be equal to each other. 11 is 4 less than 15 and □4 less than 4. So I need 4+4=8 to make both sides same”</td>
</tr>
</tbody>
</table>

The studies carried out reveal that students with relational thinking skills at early periods are more successful in advanced algebra topics, algebraic reasoning, and solving problems that require equations (Alibali, Knuth, Hattikudur, McNeil & Stephens, 2007; Jacobs, Franke, Carpenter, Levi & Battey, 2007; Kieran, 1992; Knuth and et al, 2006; NRC, 1998). Undoubtedly, teachers who notice whether or not their students have this skill will be able to make correct educational decisions for the future.

1.3. Teacher Professional Noticing About Equal Sign

For the last ten years, the concept of professional noticing has become a highly increased issue among mathematics education researchers (Schack, Fisher, & Wilhelm, 2017; Sherin, Jacobs, & Philipp, 2011; Fisher, Thomas, Jong, Schack, Dueber, 2019). In addition to this, considering the studies carried out in the field of algebra, it is viewed that relational thinking is accepted as an important stage for students’ transition to algebra (Carpenter et al., 2005), but unfortunately students lack this skill (Kieran, 1981; McNeil&Alibali, 2005). Moreover, there are studies which reveal that teachers and pre-service teachers can develop students’ relational thinking skills with some activities (Carpenter et al. 2005, Matthews, Rittle-Johnson, McEldon, & Taylor, 2013; Knuth et al., 2006). In order to do this, teachers must understand and analyse correctly what is going on in the learning environment. Thus, this study aimed at revealing prospective teachers’ professional noticing related to students’ attitudes towards the equal sign. Because there are not any studies encountered about pre-service teacher noticing related to the equality and relational thinking in Turkey, the contributions this study will make is important.

2. Method

This case study carried out to explore preservice teachers’ professional noticing related to their students’ attitudes towards the equal sign consisted of two phases (Hitchcock & Hughes 1995: 317).

In the first phase, the preservice teachers were asked to implement a task prepared before for the 6th, 7th, and 8th grade secondary school students and observe their students throughout the process and make an effort to understand what their students did as far as possible. Moreover, the candidates were asked to decide whether or not the problem was solved appropriately according to their opinions and also guide their students during the solution process, if required. The whole process was video-recorded. (During the process only worksheets were video-recorded but students were not included in the recording).

In the second phase, one of the researchers watched the problem-solving process video with each preservice teacher and asked them to answer the questions given below throughout the process:

Can you please explain what your students did for each question and how they solved them?
When you analyse the students’ ways of solution, do you think there are differences between the ways (or methods) of solution? Can you categorize the ways of solutions? Can you compare three students’ ways of solutions among themselves? What are the similarities and differences?

Have you interfered with your students’ solutions (although they solve problems correctly or incorrectly) for getting better solutions? Do you think of interfering? Why?

2.1. Participants

The participants of the study were selected by convenience sampling, one of the purposeful sampling methods. Convenience sampling is prompt and practical for the researchers and thanks to it, the researcher chooses a case on the basis of proximity and ease of access (Yıldırım & Şimşek, 2008). In addition to this, the study has two different types of participants. The first participants of the study are 8 preservice teachers in their final year of studies in the department of elementary mathematics education at a state university located in Aegean Region, Turkey. The preservice teachers took major area courses such as algebra education and special teaching methods and they still continue their internship programs. The second group of the study participants are 24 6th, 7th, and 8th grade secondary school students studying at a state school with high socio-economic background in the same region. The students were chosen among those from moderate and high levels of academic achievement. Due to confidentiality, the preservice teachers were given codes as PT1, PT2, PT3,..., PT8 instead of using their names, and the students were called PT 1.6, PT 1.7, PT 1.8. The first number represents the prospective teachers, and the second number indicates the grade of the student who was examined by the prospective teacher. For example, PT1.6 means the first teacher candidate’s 6th grade student.

2.2. Data Collection and Instruments

The data was collected in two phases. In the first phase of data collection, “Diagnostic Clinical Interview Protocol” consisting of different types of equation questions was used. The clinical interview protocol, designed by the researchers, consisted of eight tasks in which prospective teachers follow student approaches to equality. 7th and 8th grade students were asked the same questions. The same questions were asked differently for 6th grade students. For example, since the equation solutions did not take place in the 6th grade of the Turkish curriculum, boxes were used instead of x to investigate the meaning of the equation. This interview form was adapted from the form used by Van den Kieboom, and et al. (2017) in their studies. The interview form was examined by two expert educators and they were in agreement about its convenience and practicality for its validity and reliability. In the first phase, while students solved questions, the process was video-recorded and then the whole process was watched with each preservice teacher and the researcher. During this watching together, the researcher and the candidate’s talks were voice-recorded. Thus, the data collection tools include the interview form implemented with the secondary school students, video recordings consisting of the solution process, and voice-recordings of the semi-structured interviews carried out with the researcher and the candidate. Each teacher (8) was responsible for three students, so 24 interview recordings (6th, 7th and 8th grades, 8.3=24) were analyzed.

2.3. Procedure of Data Analysis

The data analysis was carried out in two phases as in the data collection procedure. The first phase aimed at determining secondary school students’ attitudes towards equality and the second phase was intended for determining the preservice teachers’ noticing of these attitudes. These phases were explained in-detail below.

2.3.1. Phase I

In the first phase, firstly, video-recordings were examined and then the students’ solutions were analyzed according to the framework expressed in Table 1. After that, firstly discrete solutions and student attitude profiles were identified. Primarily, it was decided that under which categories the attitudes fell into in literature called ROT, FOT, CO, and RT. When there were hesitations about some points, ideas were exchanged with the other researcher. The disintegration of some categories within themselves was mentioned in the next section (findings).

2.3.2. Phase II

In the second phase, some research was carried out about the components of noticing in order to determine the preservice teachers’ noticing. Considering the attending construct, it was investigated whether or not the
candidates recognised the ways of thinking (ROT, FOT, CT, RT) identified in the first stage correctly. For this purpose, the video-recordings were analysed and the researcher asked the candidates the question “Can you please explain the solution process of the students?” Then, the indicators for this were turned into a statement. The scores one can get according to the rubric were given in Table 2.

Table 2. For attending

<table>
<thead>
<tr>
<th>Demonstration</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/he recognises the entire mathematical thinking in their students’ solutions.</td>
<td>3</td>
</tr>
<tr>
<td>S/he recognises most of the mathematical thinking in their students’ solutions.</td>
<td>2</td>
</tr>
<tr>
<td>S/he recognises less than half of the mathematical thinking in their students’ solutions.</td>
<td>1</td>
</tr>
<tr>
<td>S/he recognises too little mathematical thinking in their students’ solutions.</td>
<td>0</td>
</tr>
</tbody>
</table>

For interpreting, the second construct, the preservice teachers were asked to create a profile for each student with whom he interviewed by considering their solutions. “For example, my 6th grade student uses Rigid operational thinking with all/ most questions, so he is a rigid operational thinker” and etc. In addition to this, considering the grades (6th, 7th, 8th), they were asked to explain whether or not there was a difference between the students’ ways of solutions. The scores one can get according to the rubric were given in Table 3.

Table 3. For interpreting

<table>
<thead>
<tr>
<th>Demonstration</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/he can determine his/her three students’ thinking profile and explain their similarities and differences.</td>
<td>3</td>
</tr>
<tr>
<td>S/he can determine his/her two students’ thinking profile and explain their similarities and differences.</td>
<td>2</td>
</tr>
<tr>
<td>S/he can determine only one student’s thinking profile.</td>
<td>1</td>
</tr>
<tr>
<td>S/he cannot determine any of his/her students’ thinking profile.</td>
<td>0</td>
</tr>
</tbody>
</table>

For responding, the last construct, how the preservice teachers guided their students was explored. Although their solution was correct, whether or not they did something was questioned by the preservice teachers in order to encourage students for a more meaningful solution. The scores one can get according to the rubric were given in Table 4.

Table 4. For responding

<table>
<thead>
<tr>
<th>Demonstration</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Although his/her students’ problem-solution is true, s/he can interfere for a better way of solution.</td>
<td>3</td>
</tr>
<tr>
<td>Although his/her students’ problem-solution is true, s/he thinks of interfering.</td>
<td>2</td>
</tr>
<tr>
<td>If his/her students’ solution is false, s/he thinks it is right to interfere.</td>
<td>1</td>
</tr>
<tr>
<td>S/he does not have any idea whether she should interfere or not.</td>
<td>0</td>
</tr>
</tbody>
</table>

As observed in the tables, the maximum score one can get from the indicators is 9 and the minimum score is 0. According to this, the following levels of noticing were determined: the points between 0 and 3 are low, 4-6 are medium, and 7-9 are high.

The data were analysed by the same researcher at different times and by another researcher reciprocally to provide reliability for the analysis of the findings. When there were incompatibilities, they discussed and came to an agreement.

3. Findings

3.1. Findings Phase 1

The distribution of student thinking for the equal sign which occurred after watching the video-recordings for each student was presented in Table 5 according to the theoretical framework:

Table 5. The distribution of student thinking for the equal sign

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT-1.6</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
</tr>
<tr>
<td>PT-1.7</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
</tr>
<tr>
<td>PT-1.8</td>
<td>RT</td>
<td>RT</td>
<td>RT</td>
<td>RT</td>
<td>RT</td>
<td>RT</td>
<td>CT</td>
<td>CT</td>
</tr>
<tr>
<td>PT-2.6</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
</tr>
<tr>
<td>PT-2.7</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
</tr>
<tr>
<td>PT-2.8</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
</tr>
<tr>
<td>PT-3.6</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
</tr>
<tr>
<td>PT-3.7</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
</tr>
<tr>
<td>PT-3.8</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
<td>CT</td>
</tr>
</tbody>
</table>
According to Table 5, out of 192 questions, 176 of them were answered (because two students solved the questions without an explanation, the solutions ways of 16 questions could not be determined). CT was identified as a solution construct for 164 questions (%93) and RT for 12 questions (%6,8). The constructs ROT and FOT were not encountered. That is, students were not interested in on which side the equal sign was. The fact that they passed this stage reveals that their levels about their attitudes towards equality are high, which is a promising condition.

In addition, it was detected that CT, which has the highest share in thinking profile, reveals some differences in itself. Considering the explanations made about CT in literature, as stated in Table 1, “in order to find an unknown in the equation, the numbers in the unknown part are added, and the number (s) including the unknown in the equation are subtracted from the total”. However, some differences were observed with some students’ thinking processes after watching the video-recordings. The information obtained from a video-recording was given in Figure 1:

![Figure 1. Sample Student's (PT 4.6) Solution](image)

**PT4.6:** “5 plus 7 makes 12 on the right side. So, 4 plus what number is 12 on the left side? Hmm, 8 must go into the box”.

In fact, the students’ solution is a typical CT but it is understood from the students’ verbal statements that he actualized mathematical reasoning beyond a routine operation. He did not subtract 4 from 12, but he thought that to get 12, what number he would add with 4. We decided to use “beyond computational thinker (BCT)” for the students who approached this way, but this description is different from the structure “basic relational thinker” (Matthews, P., Rittle-Johnson, B., McEldoon, K., & Taylor, R., 2012) encountered in literature because a lower level of relational thinking is mentioned here (eg: 4 + 5 + 8 = □ + 8)

In addition to this, it was observed that some students called CT found the answer with a routine operation. Some students who knew how to solve equation algorithms isolated an unknown in the equation and reached the solution without reasoning. A section from a sample student solution was given Figure 2:
PT 5.7: “In the equation, 56 moves to the other side as −56.”

The difference between this student and the CT student is that he applied the algorithms he learned in the lesson without questioning the equality. We decided to use the term “routine computational thinker (RCT)” for students who think this way.

In addition to such students who think this way, according to the findings obtained, CT students appeared as in the literature. A solution by a student having this way of thinking is presented in Figure 3:

The solution procedure of PT.7.6 reflects a typical CT thinking.

It is possible to identify student profile based on CT, BCT and RCT. Considering the dominant ways of thinking students used while solving the questions, each student reflects a dominant thinking profile (Table 6):

Table 6. Students’ thinking profile

<table>
<thead>
<tr>
<th>Student</th>
<th>CT</th>
<th>RCT</th>
<th>BCT</th>
<th>RT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT-1.6</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT-1.7</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT-1.8</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>PT-2.6</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>PT-2.7</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT-2.8</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT-3.6</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>PT-3.7</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT-3.8</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT-4.6</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>PT-4.7</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT-4.8</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>PT-5.6</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>PT-5.7</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT-5.8</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT-6.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PT-6.7</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
When Table 6 is examined, it is viewed that student profiles are predominantly BCT for the 6th grade and RCT for the 7th and 8th grades. This is partially an expected outcome. Solving equations is taught in the 7th grade in secondary schools in Turkish National Education Curriculum (MEB, 2018). That is, the reason why the 6th graders do not use the algorithm for solving equations is that they have not learnt the algorithm yet. The dominant profile of the 7th and 8th grades is RCT but it is not RT for the 6th grades. On the other hand, there is one RT profile in the 7th grade and two RT profiles in the 8th grade.

3.2. Findings Phase 2

The second section of the findings, based on the student responses, examined how preservice teachers discussed the student responses. PT6 was excluded because of lack of student explanations. According to this, the scores preservice teachers got from the components of noticing were graded as in Table 7:

<table>
<thead>
<tr>
<th>Noticing Constituent</th>
<th>Demonstration</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT1</td>
<td>Three different solutions were exhibited and she saw three of them.</td>
<td>3</td>
</tr>
<tr>
<td>PT2</td>
<td>Although three different solutions were exhibited, he said that there was only one method of solution.</td>
<td>1</td>
</tr>
<tr>
<td>PT3</td>
<td>Although two different solutions were exhibited, he said that there was only one method of solution.</td>
<td>2</td>
</tr>
<tr>
<td>PT4</td>
<td>Three different solutions were exhibited and she saw three of them.</td>
<td>3</td>
</tr>
<tr>
<td>PT5</td>
<td>Although four different solutions were exhibited, he said that there were three methods of solution.</td>
<td>2</td>
</tr>
<tr>
<td>PT7</td>
<td>Although three different solutions were exhibited, she said that there were two methods of solution.</td>
<td>2</td>
</tr>
<tr>
<td>PT8</td>
<td>Although three different solutions were exhibited, she said that there were two methods of solution.</td>
<td>2</td>
</tr>
<tr>
<td>PT1</td>
<td>There were two different profiles, she saw both of them. She mostly explained the differences between the profiles.</td>
<td>3</td>
</tr>
<tr>
<td>PT2</td>
<td>Although there were two different profiles, he said that there was only one profile. He explained very few differences between the profiles.</td>
<td>1</td>
</tr>
<tr>
<td>PT3</td>
<td>Although there were two different profiles, he said that there was only one profile. He partially explained the differences between the profiles.</td>
<td>2</td>
</tr>
<tr>
<td>PT4</td>
<td>There were three profiles and she saw three of them. She mostly explained the differences between the profiles.</td>
<td>3</td>
</tr>
<tr>
<td>PT5</td>
<td>There were two different profiles and he said there was only one profile. He partially explained the differences between the profiles.</td>
<td>2</td>
</tr>
<tr>
<td>PT7</td>
<td>There were three profiles and she saw two of them. She partially explained the differences between the profiles.</td>
<td>2</td>
</tr>
<tr>
<td>PT8</td>
<td>There were three profiles and she saw two of them. She partially explained the differences between the profiles.</td>
<td>2</td>
</tr>
<tr>
<td>PT1</td>
<td>He does not think of interfering provided that the solution is false.</td>
<td>1</td>
</tr>
<tr>
<td>PT2</td>
<td>He does not think of interfering provided that the solution is false.</td>
<td>1</td>
</tr>
<tr>
<td>PT3</td>
<td>He does not think of interfering provided that the solution is false.</td>
<td>1</td>
</tr>
<tr>
<td>PT4</td>
<td>She does not think of interfering provided that the solution is false.</td>
<td>1</td>
</tr>
<tr>
<td>PT5</td>
<td>He does not think of interfering provided that the solution is false.</td>
<td>1</td>
</tr>
<tr>
<td>PT7</td>
<td>She does not think of interfering provided that the solution is false.</td>
<td>1</td>
</tr>
<tr>
<td>PT8</td>
<td>She does not think of interfering provided that the solution is false.</td>
<td>1</td>
</tr>
</tbody>
</table>

When Table 7 was examined, it was observed that only two preservice teachers could get the full marks from the components of attending and interpreting. One candidate could get 1 from each stage. The rest of the preservice teachers got 2 in both of the stages. Considering the last stage, all the candidates could get only 1 from this stage.
On the other hand, considering the total scores, one student (PT2) was ranked in the low level of noticing, four students (PT3, PT5, PT7, PT8) were ranked as middle, and two students (PT1, PT4) were ranked in the high level of noticing. The candidates usually got higher scores from the first component (attending), but the fall began later. It was observed that the per-service teachers got the lowest scores in the last stage. All the candidates had a tendency to not to suggest an alternative solution provided that students do not make mistakes. The reason for this could be that they do not know how to assess students' solutions. In addition to this, the candidates mostly mixed CT, RCT and BCT ways of thinking with each other. Examples from the preservice teachers' views were given below:

**PT2 (low):** "They directly move to the other side as minus but they do not show them with arrows. They did not use a different thing, they only added or subtracted. To me, different from them, in order to isolate the unknown, they could add the same number to both sides or subtract from both sides. Three students' solution methods are the same; all of them actually use the algorithms for solving equations. The 6th grade student also solves equations. But all of them solved the questions correctly”.

However, the students with whom the preservice teacher interviewed were identified as CT, RCT and BCT. But, the candidate interpreted all the solutions as RCT and stated that all of the candidate profiles were RCT. The candidate could not distinguish these three ways of thinking.

**PT3 (middle):** "They take from one side and add to the other side. The 6th grade student always used the same method, he thinks as he was thought the first time. The 8th grade student collected the unknown to the one side and known to the other side. This student also did the same things. The 7th grade student isolated the unknown. All of them used the same way. One student solved it in his mind immediately and did not show how he moved it to the other side. I could not see any differences between these three students. I did not interfere as the solutions were correct”.

In fact, the students with whom the PT3 interviewed were identified as RCT and BCT. The preservice teacher asserted that there was not a difference between them and three of them were RCT.

**PT4 (high):** "They usually transfer the sign as plus if it is minus or minus if it is plus. But of course there were some who thought logically. For example, one of them said that if 4 plus 4 is 9, then if I add something and 6, the result is 9. He thought what this thing was. The thing here is the box. Therefore, the thing is equal to 3. The 7th grade student transferred this directly to the other side but the 6th grade student using reasoning thought how to get this number by adding what numbers. He said that this is what they say while teaching addition in the 1st grade. The 7th grade student solved it in his mind immediately, he applied the rules he learned directly without thinking. The 8th grade student is more logical. He comprehends that this is equality and one of the equation is equal to the other side of the equation. He knows what is unknown very well. When I look at these three children, I see three different ways of thinking. As a different solution, they could continue with 1 less and 1 more. But I did not interfere because the student solved it correctly”.

Considering the explanations of CPT4, it draws attention that they include more detail. The teacher candidate picked up all of the solution methods and she could identify her students' profiles. Especially, the other candidates frequently confused CT and BCT, but PT4 did not make this mistake.

As observed from the explanations, the mistakes mostly resulted from not being able to distinguish CT, RCT and BCT. The preservice teachers did not make the same mistake when it came to RT.

### 4. Results and Discussion

When the studies carried out about the concept of equality (Matthews, et. al.,2012; Van den Kieboom, et. al., 2017) were examined, it is viewed that there are some discrete approaches exhibited by the students while solving equations under different names. It was concluded in this study that two more approaches could be added to these approaches and it was decided to use the expressions “routine computational thinking” and “beyond computational thinking”. While doing that, the evidence showing that these two approaches resulted from different types of thinking under the roof of “computational thinking” was used (see Figure.1, Figure.2, Figure.3). Firstly, it is viewed that nearly all of the beyond computational thinkers are the 6th grade students who have not learned the solution of algebraic equations yet. Although students did not know the algorithm for solving equations, it was observed that they were frequently accused of knowing this algorithm (being a RCT) and this condition leads to the assumption that the preservice teachers will teach these rules untimely in the future in spite of the flexible transition from arithmetic to algebra and curriculum rules. Hence, it could be
useful to determine preservice teachers’ noticing. In addition, the preservice teachers must analyse the students’ reasons for having such approaches.

After this theoretical implication, the results of the study will be discussed in two phases as in the findings.

Considering the findings about the secondary school students, it is viewed that the dominant approach profile for the 6th graders is BCT. It is pleasing that they do not have the misconceptions about equality in the literature. Of course, the high academic achievement of the chosen students has a big share. However, it draws attention that the relational thinking approach whose importance is frequently emphasized during the transition process from arithmetic to algebra (Stephens, 2006) has not been used by the 6th grade students. However, this approach was mostly preferred by the 8th graders. This exhibits that the 8th graders looked for a solution via reasoning rather than routine operations. The 7th grade students are predominantly in the RCT category. In addition, the 7th graders were the groups who applied the algorithms for solving equations which they learned regularly. However, this is the grade that the shift to equation solving was ensured (MEB, 2018) and also it could be the period to acquire relational thinking. Considering the advantages of the relational thinking for the future topics, it is important that this process should be reconsidered effectively.

The findings of Phase 2 in the study are about the professional noticing of the pre-service teachers. The findings obtained as a result of analysis carried out according to the framework developed by Jacobs and et al.(2010) reveal that the noticing levels of pre-service teachers accumulate mostly at middle level (4 pre-service teachers out of 7). When the pre-service teachers examined their students’ solutions, they had difficulties distinguishing CT, BCT, and RCT. RT became a more specific approach for the noticing levels of pre-service teachers and it was easily recognized contrary to the findings obtained from the earlier studies (Asquith, Stephens, Knuth, & Alibali, 2007; Stephens, 2006).

Based on the attending stage, the candidates demonstrated similar performance while determining the student profiles. However, the biggest fall was experienced at the responding stage because the candidates did not guide their students and stated that they did not think of guiding them. According to them, it was enough for students to solve the questions. This attitude of candidates contradict with the suggestions offered about professional noticing (Hines & McMahon, 2005; Holt, Mojica & Confrey, 2013) and transition process from arithmetic to algebra (Sherman and Bisans, 2009; Driver and Powell; Alibali, Knuth, and Hattikudur, 2007). The pre-service teachers must be more knowledgeable and experienced about the features of relational thinking, the transition from arithmetic to algebra, and period before algebra.

This study did not investigate the pre-service teachers’ gains about the concept of equality after this study just like the studies carried out by Van den Kieboom and et al. (2017). Because they questioned how pre-service teachers strengthened their knowledge during the study. However, as supported with the earlier studies (van Es & Sherin, 2002), periodic repetition of such studies and studying the detailed student responses in faculty courses naturally will develop pre-service teacher noticing about this and different subjects. Thus, the professional noticing of teachers is a process which can be developed and improved (Star and Strickland, 2008; van Es, 2011; van Es and Sherin, 2002). Based on this result, new studies can be designed in order to improve student approach awareness of prospective teachers.

References


MEB. (2018). Turkish National Education Curriculum. http://mufredat.meb.gov.tr/Dosyalar/201813017165445MATEMAT%C4%B0K%20%C3%96%C4%9ERET%C4%B0M%20PROGRAMI%202018v.pdf (14.05.2019)


Examining Mathematics Teachers’ Use of Curriculum and Textbook

Şahin Danışman
Düzce University, Turkey

ARTICLE INFO
Article History:
Received 02.08.2019
Received in revised form 02.09.2019
Accepted 10.09.2019
Available online 30.09.2019

ABSTRACT
The aim of this study is to determine how mathematics teachers interpret curriculum and textbooks and to what extent / how they use these materials. For this purpose, case study design was used and 45 mathematics teachers constituted the study group of the study. The data obtained through the structured interview form developed by the researcher to determine teachers’ use of textbooks and curricula were analyzed deductively. According to the findings obtained from the analysis, it was seen that teachers working in both secondary and high school levels did not like the textbooks and curricula sufficiently and did not prefer to use them in their lessons. The reasons for this are that the textbooks contain various errors, are not interesting, are not suitable for student level; Even if the curriculums are updated, they are still dense and have uneven distribution of the content according to class levels. Teachers prefer to use supplementary resources as well as textbooks. On the other hand, there are also teachers who express positive opinion about the textbook and curriculum. One of the interesting findings of the study is that teachers’ perceptions of curriculum are generally acquisition-oriented.

Keywords:
Curriculum, textbook, mathematics

© 2019 IJPES. All rights reserved

1. Introduction

“…teachers make a difference” (Wright, Horn, & Sanders, 1997, s.57)

While the term “curriculum” is used as the program in which the content of a particular course is drawn in our country, it is used as the resources used by teachers in addition to the content of the course by the researchers and teachers in other countries (Stein, Remillard, & Smith, 2007). Oliva (2009) argues that the curriculum and the teaching are part of a cyclic process, that they are closely related to each other and that they cannot be isolated from each other even though they can be studied and studied as two different terms. Therefore, it will not be wrong to discuss and interpret the textbooks and the curriculum as an important part of the teaching process. Teachers implement the program materials with a specific interpretation or adaptation (Brown, 2009). Components such as teachers’ knowledge, skills, past experiences and beliefs affect teachers’ interpretation and usage levels of the program (Ball & Cohen, 1996; Brown, 2009; Peterson, Fennema, Carpenter, & Loej, 1989; Stein, Remillard, & Smith, 2007). Therefore, it is very difficult to reflect the curriculum in the classroom environment as prepared by the program developers. Stein, Remillard and Smith (2007) depict the stage from the preparation of the program to the reflection of students’ learning, as shown in Figure 1 (p.322).
While the official or planned program is the program created by the policies and reflected in the textbooks; the intended program is the program which is designed by teachers for the instruction; the implemented program is the program which includes whatever done by the teachers in the classroom activities. These stages, from planning to implementation of the program, are affected by various variables, while the program implemented in the classroom provides learning to the extent that it is reflected to the students. The reflection of the student learning and the applied program to the teacher also affects how the program will be implemented the next time (Stein, Remillard, & Smith, 2007).

Although research on teachers’ use of curriculum and materials has increased in recent years, it cannot be said to be sufficient (Lloyd, Remillard, & Herbel-Eisenmann, 2009). In both local and foreign literature, there are researches conducted frequently to examine how teachers who are the implementers of the programs interpret, evaluate and implement the programs and materials. Most of the studies carried out in the local literature are related to the evaluation of the curriculum (Budak, 2011; Çiftci ve Tatar, 2015; Konur ve Atlıhan, 2012; Üludağ, 2012) and books (Arslan ve Özpınar, 2009; Işık, 2008; Tutak ve Güder, 2012; Yüksel, 2010) according to the teacher opinions; while the studies conducted on how and to what extent teachers use mathematics textbook (Altun, Arslan ve Yazgan, 2004; Işık, 2008) and curriculum in the classrooms are rare. On the other hand, prominent studies in the foreign literature indicate how often and at what level teachers use program-related materials (Ben-Peretz, 1990; Brown, 2002; Brown & Edelson, 2003; Lloyd, 1999; Manouchehri & Goodman, 1998; Remillard, 2000, 2005; Sosniak & Stodolsky, 1993; Wiley, 2001).

Shulman (1986), who treats curriculum knowledge as an important component of teachers’ teaching knowledge, asserts that the actual program is the program that teachers experience in the classroom rather than the published texts and documents (Shulman, 1990). Similarly, Ben-Peretz (1990) draws attention to the relationships between teacher-curriculum and program materials; he suggests that teachers’ program interpretation levels have the potential to be implemented beyond the objectives of the curriculum and materials, as it is an important component that could result in the use of curriculum that differ from program developers’ intentions. Wiggins and McTighe (2005), who state that teachers are “designers”, argue that the main act of teaching is to process the curriculum as a craftsman and to create learning experiences to achieve certain goals. Parallel to these views, Brown and Edelson (2003) grounding on the idea of teaching as design focused on the interaction between individuals and tools and listed three important processes related to teaching as design (p.1):

Curriculum materials play an important role in the realization and prevention of teachers' actions.

Teachers interpret and use such phenomena differently depending on their experiences, intentions and abilities.
Teaching as design is not an entirely conscious choice but an inevitable reality.

In order to make this point of view more understandable, Brown (2002, 2009), who focuses on the relationship between teachers’ personal characteristics and teaching materials, has proposed the Design Capacity for Enactment Framework (Figure 2).

**Figure 2. Design Capacity for Enactment Framework**

In Figure 2, the left side represents the characteristics of the curriculum and materials, the right side represents the characteristics and capacities of the teachers, and the central part represents the way teachers use the materials related to the program in designing the teaching and the interaction between them. The framework reveals different types of interactions that occur as teachers adapt, embrace or improvise with program resources (Brown, 2009).

There are various studies examining the teachers’ use of curriculum materials in different categories (eg. Freeman, Belli, Porter, Floden, Schmidt & Schwille, 1983; Lambdin & Preston, 1995; Remillard & Bryans, 2004). In a review of teachers' use of the program and materials, Remillard (2005) revealed four types of program use. *Teachers who use the program by following or subverting it* treat the texts in the program as a starting point and then determine the degree to which they will follow or convert. This point of view is close to the positivist approach and assumes that the degree of harmony between teachers in the written and applied program may be high. Deviation from the written program reflects teachers' tendency to traditional pedagogical approaches and mathematical representations. They are more reluctant to follow pedagogical recommendations. *Teachers who adopt to use the program by drawing on it*, first recognize their class, then transfer the texts to their teaching and use the structured program. Although program materials are useful for teachers, they do not have the power to shape individuals' actions. One-to-one harmony between written plans and in-class actions of *teachers who interpret and use the program* is impossible. Teachers approach the program using their own beliefs and experiences and form their own meaning. They interpret the intentions of the authors when using the materials in the curriculum. The teachers' interpretations of the reforms and use of books quite differ from each other. *Teachers who participate with the program* collaborate with the materials, and the materials and teachers interact dynamically. Both the teacher and the materials both actively participate in the teaching process.

Although various groupings have been made by various researchers regarding the use of teachers’ curricula and textbooks, it will not be realistic to argue that teachers should be included in any of these groupings. While teachers may not be fully involved in any of these categories, it is also possible for teachers to be included in different categories at different times, for different purposes (Brown, 2009; Lambdin & Preston, 1995). Since the curriculum defines the limits of the classroom practices of teachers (Wertsch, 1998), it will
not be wrong to assume that both the curriculum and the textbooks which are the reflection of the program affect the classroom teaching of teachers. Considering that curriculum-related materials were created by curriculum developers and policy makers to influence / realize teaching, it can be concluded that it is very important to demonstrate how teachers implement the content and philosophy contained in these materials, and how and to what extent they reflect on classroom teaching (Brown, 2009). Therefore, the aim of this study is to determine how mathematics teachers interpret curriculum and textbooks and to what extent / how they use these materials.

2. Method

2.1. Design

Within the scope of the research, since the teachers' opinions about the curriculum and textbook usage will be taken and an existing situation will be revealed, case study design from the qualitative research method has been adopted.

2.2. Participants

The study group consisted of 45 mathematics teachers who were determined by convenience sampling method. The participants were almost equal in terms of gender and educational level. Demographic data of the participants are presented in Table 1.

<table>
<thead>
<tr>
<th>Table 1. Demographic characteristics of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Secondary School</td>
</tr>
<tr>
<td>High School</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experience</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td>5-9</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>10-14</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>15+</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100</td>
</tr>
</tbody>
</table>

2.3. Data Collection Tools

In addition to the structured interview form prepared by the researchers consisted of six open-ended questions in addition to demographic questions and was used as a data collection tool in the research. Three of the six questions were directed towards teachers' use of textbooks and their views on books; two are directed to the use of the curriculum and their thoughts on the curriculum. The last open-ended question asks what they want to add (if any) about the use of textbooks and curricula. Participants expressed their views using the form via e-mail addresses or social media.

2.4. Data Analysis

The answers obtained from the participants were analyzed deductively under the themes determined for each question. Pseudonyms were used for the participants and quotations from the participants' own statements were used when presenting the analysis results. The pseudonyms used were determined by the Gender-Education level-Experience trio. For example, "MH-12 shows that the participant is a male, a high school math teacher, and has 12 years of experience."
3. Findings

The findings obtained from the analysis of the data of the participants’ responses were presented under the themes identified for each question. The themes identified in this context are the opinions about the textbooks, the use of textbooks, the use of supplementary resources, the opinions about the curriculum and the use of the curriculum. The opinions of the teachers are presented in the related section under these themes. Since the curricula and textbooks differ in secondary and high school levels and in order to evaluate homogeneous materials in the same type, the findings are presented separately for secondary and high school levels.

![Figure 3. Design Capacity for Enactment Framework](image)

These themes have been elaborated below.

3.1. The Views About the Textbooks

Secondary school mathematics teachers stated that they did not like the textbooks and that the books contained various problems. According to the teachers, the introduction examples are inadequate, the books are not age-appropriate and difficult for the students, the order of the questions is not appropriate, they do not fully meet the acquisitions, there are spelling mistakes, the content is inadequate, there are incorrect calculations or operations, they do not take into account the preliminary knowledge of the students, the activities are not interesting, there are few examples, they are not compatible with the exam system (for the eighth grade), some subjects are superficial, the number of exercise questions is insufficient, books are prepared sloppy, samples should be diversified. On the other hand, there are few teachers who find the textbooks interesting and think that they can be developed although they are sufficient. While the number of examples in the books published by the Ministry of Education is high, the books by private publishers include less number of examples.

The teacher who criticized the activities in the textbooks stating that the books were prepared without taking the students’ prior knowledge into account, expressed this view as follows:

“It is full of unnecessary activities. The issue must be arranged for understanding. Even most of the students lack basic knowledge in many schools in Turkey, the activities in the textbooks have been prepared assuming that the students know everything.” (KO-2)

EO-11, who did not find the books interesting and claimed that the books include incorrect questions, added that those who prepared the books did not take into consideration the suggestions he made and encountered the same mistakes in the books in the following year. That’s why he did not prefer using these books.
The teacher, who evaluated the eighth grade textbook as exam-oriented, stated that the book did not agree with the system, and another teacher who criticized the eighth grade textbook in another aspect stated that:

“Inadequate, incomplete, few samples, not suitable for the examination system. The system requires plenty of tests for a test like entrance exam, but the book lacks them” (EO-4)

“I think that the narratives and examples in the book of the eight grade are more difficult than the ones desired by the curriculum” (KO-2)

On the other hand, KO-5, who uses the textbooks as an auxiliary resource, states that the activities contribute to the course and use the attention sections included in the book when starting a new topic.

It is seen that high school teachers also criticize textbooks in a similar way to middle school teachers and they do not like it very much. Teachers think that the textbooks are not compatible with the curriculum, that the questions are good while the explanations and exercises are insufficient, that they are not useful and suitable for the students’ knowledge levels, that the number of questions is insufficient, that the typesetting is not done well, that they are superficially prepared and incorrect information is included, that the number of real life problems is low, that they seem to be prepared by competent people, that they are not attention grabbing, and that the books are useless, wasted, unnecessary, and boring. While some teachers stated that they never looked at the book and did not use it, the number of teachers who used the book as a reference and found it sufficient was limited to only a few.

It is seen that teachers have a tendency to make suggestions while presenting their opinions on textbooks. In addition to suggestions such as writing more carefully for less number of mistakes (EL-8) and supporting the textbooks with exercise books (EL-22), the two teachers’ remarkable suggestions regarding the physical characteristics of the book and the inconsistency of the content are as follows:

“The typesetting should be revised to be simplified and saved from the strenuous intense appearance. The end of the topics should include a greater number of quiz and classic-style questions. The density of the subject should be organized according to the types of high school [as vocational or science high schools] and books should be created in 2 or 3 categories.” (EL-3)

“Some of the questions in the textbook (especially chapter evaluation questions) require information that has not been mentioned in the chapter or may not be compatible with the grade level. For this reason, I think that the textbooks should go through a more effective correction process.” (EL-13)

In addition to the view of KL-5, who finds the book “very superficial” and thinks that it gives “inaccurate information when trying to concretize abstract information”, EL-7 who thinks that the book is not catchy expresses his thoughts as follows:

“Textbooks prepared according to curriculum can be boring for teachers and students. Specifically, the number of examples may not be as sufficient and interesting as those of private publications.” (EL-7)

On the other hand, there are also teachers who use textbooks as reference (EL-13), find the books really sufficient (EL-20), and think that the books are well prepared (EL-8).

3.2. The Use of the Textbooks

Although a few secondary school teachers use textbooks for every lesson, there are also those who do not use textbooks at all. While there were teachers who stated that they used textbooks “sometimes” and “rarely”, there were also teachers who change the frequency of textbook usage according to class level. It is observed that the opinions of the teachers who use books different frequency levels at different grade levels contradict each other. Two teacher’s explanations regarding this situation are as follows:

“I use the 8th grade textbook and workbook [every week] [for the central examination] at the end of each acquisition. I use the Grade 7 textbook every week at the end of each acquisition. Since the number and quality of the questions are better than other grade levels, we use the 5th and 6th grade books once a month; I use them at the end of the unit. Because they are not enough to measure the knowledge according to curriculum and the number questions which the students will solve are less.” (KO-3)
"I follow the textbook in 6th grade, constantly. To let the students see both the explanation and the solution of the questions. I also give homework from the book. But for the 8th grade, I use the textbook once every 2-3 weeks, I give homework from the workbook, but the questions are bad to be honest. I'm giving homework because they have to use the course and workbook, or I won't even use it for homework." (EO-12)

There are also teachers who state that textbook usage has changed according to the subject. One of the teachers, EO-6, does not use textbooks for all subjects because it is not as effective in almost all subjects.

When the textbook usage aims of secondary school teachers are examined, it is noteworthy that teachers use the textbooks to determine the content of the course, the acquisitions included, the order of subjects, the changes in the curriculum. KO-A uses textbooks for an "overview of the topic" and KO-2 who uses "how the chapter is handled in the book and what it contains". EO-4 explains the intended use of the textbook as follows:

"I take a look at the textbooks to follow the curriculum and acquisitions for each course. I get help from different sources for examples."

In addition, teachers state that they examine books to look at how the content is presented in the textbooks, how the subject is narrated, what activities are handled, the different question types, and they use the textbook for end-of-unit evaluation questions, assignments and exercises. EO-11 states that although it is not always possible to have every activity carried out, he benefit from the sample exercises given in the book to use in the lesson. Although KO-9 and KO-5 stated that they use questions in the course by examining the question types in textbooks, they added that they thought that the textbooks were not sufficient and therefore needed additional resources.

Similar to secondary school teachers, textbook usage patterns of high school teachers changes among the scales of every lesson, once a week, rarely and not at all. EL-15, one of the teachers who use different books at different grade levels, states that while she does not use textbooks in senior classes, she chooses to follow books in the intermediate classes at the beginning of the year but later turns to different sources.

High school teachers state that they use textbooks to determine the boundaries and content of subjects, to support the lesson, to examine activities, to identify curriculum and acquisitions, and to control the changes in curricula. Therefore, the use of textbook by middle and high school mathematics teachers seem to be similar. EL-11 describes his intended use of textbook as "usually to determine the boundaries and content of the subject to be explained", while EL-8 states that he prefers to use the textbooks to see the content for the guidance but uses his own notes during the lesson. EL-6, on the other hand, explains how he uses the textbook in addition to his criticism of the textbooks as follows:

"Sometimes textbooks do not have subject integrity; they blow hot and cold. Sometimes the samples are very inadequate. In such cases, I use the course content that I prepared myself, and at other times I use the book by adding and subtracting a few things."

Some teachers state that they never use the textbooks and that they use additional resources. Some teachers state that they prefer to use the textbooks only in the classes other than the senior ones. KL-A uses the following expressions, explaining the reasons:

"I rarely use it in the lower grades. Since there are wrong questions to confuse the students, I prepare the questions myself.

3.3. The Use of Supplementary Resources

Only one of the secondary school mathematics teachers stated that she did not use supplementary resources and all the other teachers need auxiliary resources for various reasons and that they use resources other than textbooks. Increasing the diversity of questions is one of the main reasons for teachers' use of supplementary resources. KO-3 stated that he uses additional resources to see different question styles, while EO-4 stated that he used auxiliary resources to become familiar with different exercise questions by complaining about limited number of problems or exercises in textbooks. The teachers also complained about the insufficient number of quality questions in the textbooks (KO-4), the teachers prefer to use supplementary resources
since the narratives of these sources are more simple and concise, the number of questions is high(KO-2) and more appropriate for the students (KO-4).

It is seen that teachers mostly use supplementary resources especially in the eighth grade level because of the central exam, and these resources are test-oriented books that contain many questions. It is understood from the following statements that teachers try to make an instruction for the exam by eliminating the dilemma between activity-based teaching and preparing students for the exam:

"Yeah. I use it every day in all classes. Because the question styles in the supplementary books are more suitable for the students who will take the scholarship and central exam. The textbooks are activity based but exam-style and exam questions are not."(KO-2)

High school teachers stated that besides the private resources, they use the notes and worksheets they created with their own experiences as supplementary resources in the lessons. When using their own resources, it is seen that the teachers stated that they make adaptation according to the curriculum and the level of student in that academic period.

"I use sources I have prepared myself. I remove things incompatible with the program. I make adjustments according to the students' level."(EL-15)

"I use supplementary resources. However, I do not have students buy any book, magazine, and so on. The supplementary resources I use consist of lecture notes and a pool of questions I have created since the time I started teaching. I use the questions I have created from the questions that are appropriate to the level and condition of the class I will teach. I do this at all grade levels each year, creating lecture notes and questions that I think will be appropriate for them. The textbooks of the MoNE assume that the same book will be sufficient for every student regardless of the type or area of school. The number and variety of questions is not enough in the books."(EL-13)

Similar to secondary school teachers, it is seen that high school teachers tend to use supplementary resources that contain plenty of questions and tests in order to prepare students especially for the central exams. Teachers also state that they use supplementary resources for the purpose of completing the shortcomings in textbooks(KL-5) and more difficult questions are required in successful classes (EL-22) or suitable content is required for lower-level students(EL-6). In addition, teachers make students buy books having property of notebook or smart notebooks compatible with the smartboard materials to save time. The supplementary resources also have diversified and quality examples, are more suitable for the smartboards, are user-friendly.

3.4. The Views about the Curriculum

Even though the secondary school teachers find the curriculum useful and appropriate to the student level, they think that there is a need for improvement in aspects such as some examples can be presented instead of just instructions (KO-A).

In addition, there are teachers who think that some subjects are too “scythed”(KO-A). A teacher expresses her criticism as follows:

"I don't think it's true that the curriculum is constantly changing. Gradually, both injustice occurs and the level is gradually alleviated, causing generations to grow on simpler grounds in terms of knowledge. Even the student we call the best [in terms of achievement] seems to be in good shape among the unsuccessful ones."(KO-4)

In the curriculum, the existing system is criticized as incompatible with the central exam(EO-4 and KO-7) and the programs are criticized as follows:

"There are details that are not suitable for the mental development of the students and that we do not use in daily life. In addition to the basic things a secondary school graduate should know, there are many unnecessary subjects." KO-2)

"I think that it has profound content and this intensity is too much for the student and the teacher. Especially in terms of the distribution of topics there is a gap between classes. There is little relevance in the transition between subjects, and some of the qualifications required for a subject
include concepts that have not been taught to students beforehand. For example, to address the sets during the instruction of probability.” (EO-4)

In addition to these criticisms, there are also criticisms that “fifth grade content is very shallow” (KO-2) and especially at 7th grade level the program is quite intense (KO-2). There are also criticisms that the removal of certain subjects resulted in being left unsupported for some of the subjects (EO-12). However, it is also stated that there is sufficient time for the subjects and that the issues are simplified.

Among high school mathematics teachers, there are conflicting views on the curriculum. In addition to teachers who find the simplification of the program to be very appropriate and even think that it needs to be further simplified, there are teachers who argue that the program is over-simplified and that the issues are disorganized and unordered. In addition to the disorganization of the program, it is underlined that there is congestion at some grade levels, and it is suggested that mathematics instruction should be done at different number of course hours and different content in different high school types (EL-3). There were teachers who thought that the curriculum was not applicable, were constantly evacuated and did not welcome the everlasting changes in curriculum, although they think that the program was well prepared (EL-15).

3.5. The Use of the Curriculum

Secondary school mathematics teachers state that they use the curriculum in various degrees of frequency. There are also teachers who examine the program at the beginning of the year and say that they follow the achievements during the year from the book, and when they need it, they say that they examine the acquisitions that should be included in each course. In addition to the teachers who think that the teachers need to use the curriculum frequently in terms of order and parallelism of the subjects (KO-4) and that to remember the acquisitions for time arrangement (EO-14), the program should be followed every week. He expresses his opinion as follows:

“I use it to draw a roadmap on every subject. Even though I didn’t create a draft on paper, I have in my mind a teaching draft on that subject.”

It is seen that secondary school teachers mostly try to follow the program and often use it to see which “gains” are included in the courses they will take. Although not clearly separated from the use of “acquisition-oriented curriculum, the most comprehensive answer given by teachers to the use of curriculum is as follows:

“In terms of the boundaries of the subject, I don’t depend too much on textbooks. I apply to the curriculum for the basic skills to be acquired in the subjects, important points and associations related to the subject and in-class activities.” (KO-5)

Similar to the secondary school teachers, high school teachers say that they use the curriculum to see the limits of the subjects and “to adapt the system” (KL-26). In this regard, EL-16 expresses the idea as follows:

“It is very important that we know what we are aiming for. There is the answer to the question, ‘What should we teach and what not?’”

Although high school teachers often stated that they use the curriculum frequently, there are also teachers who state that they do not look at the curriculum at all or that they only use it when they plan the annual plan in September. Some teachers stated that they examined the curriculum in order to see what has changed in the curriculum compared to the previous year.

4. Conclusion

In this study, which aims to determine the views of mathematics teachers about the curriculum and textbooks and their usage levels, it is concluded that both middle and high school teachers do not like the textbooks sufficiently and prefer not to use them in their courses.

In particular, secondary school teachers stated that the contents of the book were not suitable for the age level of the students and were intense for the students. In addition, there are spelling and processing errors in the books. The fact that similar discourses were made by high school teachers led to the interpretation that
textbooks were prepared in a short time and presented to teachers. Although some criticisms such as the fact that there are typesetting errors, insufficient number of samples, and lack of interest in the books are acceptable, the fact that the faulty information is included in the books and that the books are not compatible with the curriculum can be considered as the most important mistakes that affect the education and the degree of implementation of the written program. As a matter of fact, one of the participating teachers stated that the textbooks gave the impression that they were not prepared by “competent people”. Işık (2008) states that in addition to visual design and language and expression, scientific content is also an important component of textbooks and textbooks have an important effect on teachers who begin their profession. The findings of the present study that the textbooks are difficult according to the students’ level coincide with the findings obtained by Arslan and Özdemir (2009). As a matter of fact, in the mentioned study, it was concluded that the content presented in the textbooks sometimes went above and below the student level.

It has been observed that the frequency of teachers’ use of textbooks and curricula has changed, while some teachers review and follow these materials for each lesson, some teachers do not use these materials at all or think the textbooks worth examining. Textbooks are mostly used to determine the boundaries of the subjects, to learn the subject sequence and the parts that changed according to the previous year, to perform activities, to use examples, exercises or end-of-unit evaluation questions and to give homework to the students. Teachers, especially in the last year of the central exams are away from textbooks and use supplementary resources, to see different question styles, to reach more quality questions, they prefer these resources to solve more questions. In this respect, they criticize textbooks and think that they are not compatible with the central exams. In the study conducted by Şahin and Turanlı (2005), it was revealed that the students turned to other supplementary sources instead of textbooks because of the alternative books being more comprehensible, oriented towards the exam, and containing practical solutions compared to textbooks. In the study conducted by Göçek and Hacısalihoğlu Karadeniz (2013), it was determined that students preferred alternative books due to the fact that the students found the questions in the textbooks insufficient, that there were more questions for the university entrance exam in other sources, and that there were different kinds of questions and solutions. Therefore, it can be concluded that these attitudes of teachers towards textbooks are also reflected to their students. In the study by Altun, Arslan and Yazgan (2004), it was found that high school mathematics teachers rarely used textbooks and exam-oriented books were used to prepare questions instead. In addition, in the same study, the uniformity of the samples and the low number of questions are among the other findings, which are in parallel with the present study findings.

In the study conducted by Işık (2008), it was determined that the rate of teachers using textbooks was low due to the lack of exercises and problems in the textbooks and the textbooks did not comply with the central examination. Similarly, as a result of the study conducted by Tutak and Güder (2012), it was seen that the fifth grade teachers found the assessment and evaluation activities in the textbooks insufficient. In the study conducted by Taşdemir (2011) at the elementary school level, it was determined that although the classroom teachers found the textbooks insufficient in terms of samples and the number of questions, they thought that the textbooks were highly qualified in a way that contradicted the findings of the present study. This may be the result of students not experiencing a centralized examination at primary level. On the other hand, teachers who prefer to use textbooks are very few and often use these resources at lower grade levels and always need a supplementary resource. The main aim of the teachers to use the textbooks is to determine the content of the course and to give homework. This situation was put forward in the study conducted by Işık (2008) and it was stated that teachers mostly used textbooks for the purpose of giving homework. When the use of teachers’ curricula is examined, it is noteworthy that the teachers see the programs as mostly acquisition-oriented and a list of what should be given in the course content. Although the curricula have been simplified with the last update, some teachers criticized that the acquisitions in secondary and high school are quite intense. Especially at the high school level, it is stated that the curriculum is disorganized and complicated for the teachers, probably due to the combination of mathematics and geometry courses only under mathematics.

When the findings obtained as a result of the study are examined in general, it is seen that there are similarities and differences between mathematics teachers’ curriculum and textbook usage styles and frequencies. According to the results of the findings, it is suggested that the textbooks should be reviewed
and adapted to the curriculum and the studies should be carried out in order to be scientifically error-free. In addition, teachers should be encouraged to express their opinions about the curriculum and textbook perceptions and how these materials can be used more effectively in a discussion environment. It is recommended to conduct studies involving more participants and obtaining more detailed data for teachers’ use of instructional materials. The most important limitation of the present study is the use of a structured measurement tool and it is thought that more detailed data will be obtained through one-to-one interviews.

References


Brown, M. W., & Edelson, D. C. (2003). Teaching as design: Can we better understand the ways in which teachers use materials so we can better design materials to support changes in practice? Evanston, IL: Center for Learning Technologies in Urban Schools, Northwestern University.


Uludağ, İ. (2012). *Evaluation of the mathematics program in primary education (1-5 grades) according to teachers’ views (the case of Aksaray province)* (Master’s thesis). Erzincan University, Turkey.


Yüksel, E. (2010). *The evaluation of the sixth grade mathematics textbooks of the primary education according to the views of the teachers and students* (Master’s thesis). Çukurova University, Turkey.
Gender Differences in Corporal Punishment, Academic Self-Efficacy and Drop-Out in Secondary School Students

Shamim Rafique¹ & Kashif Firaz Ahmed²

¹Allama Iqbal Open University, Islamabad, Pakistan ²Govt. Islamia College Civil Lines, Lahore, Pakistan

ARTICLE INFO

Article History:
Received 17.08.2019
Received in revised form 26.08.2019
Accepted 30.08.2019
Available online 30.09.2019

ABSTRACT

The objective of the present research was to find out gender differences in corporal punishment, academic self-efficacy and drop-out in secondary school students. The research design used for the study was correlation design. By using purposive sampling technique, a sample of 250 (74%) students of 13-18 (M= 15.59, SD= 1.62) years was recruited from 334 public secondary schools of Lahore city, Pakistan. The Demographic information sheet, Physical Punishment Questionnaire (Malik, 2014), Academic Self-efficacy Scale (Gafoor & Ashraf, 2006) and school record for drop-out was used for the assessment of the participants. The data were collected from different public secondary school students and were analyzed by using descriptive and inferential statistics (Pearson Product Moment Correlation and Independent sample t-test) through IBM SPSS. The findings of the study revealed that corporal punishment showed a positive relationship with drop-out. Boys were found to expose more to corporal punishment and had higher drop-out than the girls. Moreover, girls were higher in academic self-efficacy than the boys. The outcomes of the study are beneficial for the clinical and counseling psychologists and teachers as well as for the parents to comprehend the problems of the students and to resolve their issues.

© 2019 IJPES. All rights reserved

Keywords:
Corporal Punishment, Academic Self-Efficacy, Gender Differences, Drop-Out, Secondary School Student

1. Introduction

Education is the main route to success for an individual and a country as well. Without education, the accomplishment of desired goals is not possible. The educational field is facing many problems that are the root cause of the failure of this system especially corporal punishment is at the top. This practice is still being used by the teachers in many countries and many students are being exposed to it (Society for Research in Child Development, 2016). This practice may affect the academic life of the students and may also result in losing interest in studies and quitting the school to avoid corporal punishment.

Corporal punishment is defined as “the use of physical force with the intention of causing a child to experience pain, but not injury, for the purpose of correction or control of the child’s behavior” (Straus, 2001), such as “patting, hitting, punching, and spanking or other forms of physical punishment wherein school personnel actually strike the student with a part of the body” (Bogacki, Armstrong, & Weiss, 2005). Moreover, literature differentiates corporal punishment from physical abuse but still, some researchers “see all corporal punishment as abusive” (Hicks-Pass, 2009). Both the boys and girls are beaten in the schools but usually “girls are beaten with less force than boys” (Archambault, 2009). The reason that boys...
are more exposed to punishment is that boys are considered to be stronger than girls and male teachers are also authoritative in nature, therefore, usually, they prefer this practice (Bogacki, Armstrong, & Weiss, 2005). Despite the implementation of many legal laws to stop punishment in democratic South Africa (1996), many students regularly experienced corporal punishment during their schooling as it has been an integral part of the school system (Vally & Ramadiro, 2006). Using punishment as a mode to maintain discipline may lead to many psychological problems i.e., anxiety, low self-esteem and low academic self-efficacy.

The construct of self-efficacy has many dimensions and each dimension vary to the other (Zimmerman, 2000). Academic self-efficacy refers to “students’ confidence in their ability to carry out such academic tasks as preparing for exams and writing term exams” (Zajacova, Lynch, & Espenshade, 2005). Self-efficacy is a most important ability of a student that encourages him and leads him to success eventually; it is referred to “beliefs in one’s capabilities to organize and execute the courses of action required producing given attainments” (Bandura, 1977). It basically provides self-confidence which develops a sense of mastery in students to succeed in the academic activities and to have better planning to achieve the desired goal. Therefore, academic self-efficacy has been the basic element in explaining the process of learning and motivation. According to Bandura (1986), those individuals who have higher self-efficacy to achieve their goal are more enthusiastically participate in a task while others who possess low self-efficacy usually avoid participation. Self-concept contains academic self-efficacy and these two constructs are interrelated. Students who are confident about their self-image are also confident about their academic skills as compared to those who have a poor self-concept (Dickhauser & Steinmeier-Pelster, 2002).

Low academic self-efficacy may develop educational difficulties among the students. They may have a poor academic performance and attendance record. School drop-out is also the result of low academic self-efficacy. It is found that a large number of students start the academic year in schools but their number decrease at the end of the academic session. The rate of school drop-out is high in developing countries where the income and basic necessities of life are not fulfilled and children have to left the school without the completion of their academic year (Lewin, 2008). There are two main types of school drop-out. If a child starts school but he is not learning anything at the end of compulsory education it is called internal drop-out. Such type of drop-out is common in backbencher students who are attending the school but not learning actually whereas those students who left the school without the completion of their academic session refers to external drop-out (Millet & Thin, 2005).

Multiple factors are responsible for school drop-out. These factors can be subjective i.e., related to the health, diet, financial background and motivation of the student (Hunt, 2008). Some factors belong to the migration and other household matters. The environmental factors of school are equally responsible for drop-out, for example, the teacher’s attitude, absentee of the teacher, poor school management, and poor discipline strategies (Alexander, 2008).

1.1. Objectives

- To assess the level of corporal punishment, academic self-efficacy and drop-out in secondary school students.
- To examine out the relationship between corporal punishment, academic self-efficacy and drop-out in secondary school students.
- To assess the gender difference between corporal punishment, academic self-efficacy and drop-out in secondary school students.

1.2. Hypotheses

- There would be a negative relationship between corporal punishment, academic self-efficacy and drop-out in secondary school students.
- There would be gender differences in corporal punishment, academic self-efficacy and drop-out in secondary school boys and girls.
2. Method

The purpose of the present research was to examine the relationship between corporal punishment, academic self-efficacy and drop-out in secondary school students.

2.1. Research Design

To conduct the present study correlation research design was used.

2.2. Population

The 334 public secondary schools of Lahore district was the population of the current study.

2.3. Sample and Sampling Technique

The sample of the current study was consisted of adolescents (13-18 years). A total number of 334 public secondary school (School Education Department, 2018) was the population of the study including 154 boys and 180 girls secondary schools. By using purposive sampling technique, a sample (N =250) of 130 boys and 120 girls was recruited from 167 public secondary schools according to inclusion criteria.

2.3.1. Inclusion criteria. Students who had an age range from 13 to 18 years belonging to both genders were included. Students of public schools were recruited. Referred students by the class teacher for poor attendance in the class were included.

2.3.2. Exclusion criteria. Students with physical disabilities were excluded from the sample. Students who had learning problems. The teachers of other subjects of students (except the class in charge).

2.4. Instrumentation and Reliability of the Instruments

Three measures and personal information sheet was used for the assessment of the research participants in random order. These instruments include:

1. Personal information sheet, Informed consent and Ascent
2. Physical Punishment Questionnaire (Malik, 2014)
3. Academic self-efficacy (Gafoor & Ashraf, 2006)
4. School Attendance Record

2.4.1. Demographic Information Sheet. The demographic information sheet of students consisted of basic information of the participants.

2.4.2. Physical Punishment Questionnaire (Malik, 2014). Corporal punishment was assessed by using the indigenously developed measure of physical punishment questionnaire (Malik, 2014). It consists of 40 items which measure the different punishment practices used by the teachers in school. The scale has four response categories from one “for never” to four “for Always”. The sum of all the items is considered the final score of the participant. The scale demonstrated excellent reliability of α = .82. Content validity was assured through the judgments of expert for the face validity and inclusion of representative items for the construct.

2.4.3. Academic Self-efficacy Scale (Gafoor & Ashraf, 2006). Academic Self-Efficacy Scale is prepared to assess the academic self-efficacy of secondary school students. The scale has different dimensions. There are 20 positive and 20 negative statements in a total of 40 statements. The scale demonstrated excellent reliability of α = .81. The translated version of the scale was used in the current study. Concurrent validity of the scale was determined against ‘General Self-efficacy scale’ (Jerusalem & Schwarzer, 1979) which is. r =.68.

2.4.4. School Attendance Record. The attendance record of the students was obtained from the class teacher and the average attendance of each student was calculated by using the following formula:

\[
\text{Average Attendance} = \frac{\text{Total no. of days attended the school}}{\text{Total no. of working days}} \times 100
\]

The total no. of working days was calculated from the commencement of session till the current day.
3.3. Data Collection

After the approval of the topic, the data were collected after taking permission for the scale use and translations from the related authors via email. After this, approval for data collection was taken from the principals or headmasters of the schools. Consent was taken from the participants. The purpose of the research was informed to the participant prior to the data collection. Instructions regarding the questionnaires were provided and participants were informed that their confidentiality will be maintained. Participants were briefed about their ethical rights. The obtained data were analyzed by using suitable techniques through IBM SPSS version 20.

3.3.1. Ethical Considerations. Following ethical consideration were kept in mind to conduct this research:

- The research synopsis was approved by the AIOU research authorities.
- Approval to use the instruments was obtained from the authors of the scales through email.
- Approval for the data collection was taken from the head of the selected schools.
- The data collection was started after taking approval from the authors and principals. The participants were ensured of the confidentiality of the information provided by them.
- Researcher maintained the anonymity of the participants.
- Results were accurately reported by the researcher.

3.4. Data Analysis

Table 1. Correlation between Demographics, Corporal Punishment, Academic Self-efficacy, and Drop-out (N=250)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Age</td>
<td>-</td>
<td>-.03</td>
<td>-.01</td>
<td>-.01</td>
<td>-.12</td>
</tr>
<tr>
<td>2 Gender</td>
<td>-</td>
<td>-.14*</td>
<td>-.03</td>
<td>-.05</td>
<td></td>
</tr>
<tr>
<td>3 CP</td>
<td>-</td>
<td>-.35**</td>
<td>.42**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 AS</td>
<td>-</td>
<td></td>
<td>-.52**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 DO</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: CP = Corporal Punishment, ASE = Academic Self-efficacy, DO = Drop-out, *p<.05, **p<.01, ***p<.001

The results showed that gender was negatively associated with corporal punishment. It was also found corporal punishment showed a negative relationship with academic self-efficacy and a positive relationship with drop-out in secondary school students. Moreover, academic self-efficacy was negatively associated with drop-out in secondary school students.

Table 2. Independent Sample t-test Comparing Corporal Punishment, Academic Self-efficacy and Drop-out in Secondary School Boys and Girls (N=250)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Boys (n=130)</th>
<th>Girls (n=120)</th>
<th>t (248)</th>
<th>p</th>
<th>95%CL</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M  SD</td>
<td>M  SD</td>
<td></td>
<td></td>
<td>LL</td>
<td>UL</td>
</tr>
<tr>
<td>CP</td>
<td>6.78 .99</td>
<td>5.63 1.05</td>
<td>8.86</td>
<td>.00</td>
<td>.89</td>
<td>1.40</td>
</tr>
<tr>
<td>ASE</td>
<td>7.38 1.67</td>
<td>7.82 .64</td>
<td>-2.73</td>
<td>.01</td>
<td>-.76</td>
<td>-.12</td>
</tr>
<tr>
<td>DO</td>
<td>50.20 11.59</td>
<td>29.31 6.01</td>
<td>17.68</td>
<td>.00</td>
<td>18.56</td>
<td>23.22</td>
</tr>
</tbody>
</table>

Note: CP = Corporal Punishment, ASE = Academic Self-efficacy, DO = Drop-out, CI= Confidence Interval, LL, Lower limit, UL, Upper limit,*p<.05, **p<.01, ***p<.001
The results revealed that boys were more exposed to corporal punishment than girls in public secondary schools. Academic self-efficacy was higher in secondary school girls as compared to secondary school boys. Moreover, the drop-out rate was higher in secondary school boys than secondary school girls.

4. Findings and Discussion

School life has a great impact on an individual’s later life. School experiences are also play a vital role in the development of self-esteem and academic self-efficacy of the students. Use of aversive techniques like corporal punishment is a common practice to maintain discipline and to enhance the academic performance of students which may lead to loss of interest in studies and leaving the school without completing the academic session as well. Therefore, the current study investigated the relationship between corporal punishment, academic self-efficacy and drop-out in secondary school students. For the present study, it was hypothesized that there would be a negative relationship between corporal punishment and academic self-efficacy whereas a positive association between corporal punishment and drop-out. It was also hypothesized that there would be gender differences in corporal punishment, academic self-efficacy and drop-out in secondary school boys and girls. by using purposive sampling technique, a sample of 250 secondary school girls and boys were recruited. The results of the present research suggested that corporal punishment was positively associated with drop-out while it was negatively associated with academic self-efficacy in secondary school students.

It was also revealed from the findings of the current research that corporal punishment is positively associated with drop-out. Many researches support this finding that violence is the main cause because of which students do not like their schools and later dropped-out from the schools. Violence has different forms mild to severe but it cannot be denied that violence in any form affects a child badly. Each year the school violence report is published and updated from all over the world which is the proof that corporal punishment is still in practice. According to the estimate, every third or fourth child is being punished whether in schools or at home which the main reason for physical and mental sufferings (Ending Violence in Childhood: Global Report, 2017).

Another study conducted by Parr (2013) examined the motivation and performance is the two constructs which play an important role in the educational set up. The study tested that self-efficacy and performance predict drop-out rate of schools. After testing the model it was found that academic performance was a strong predictor of high school drop-out rate than the self-efficacy.

It was also hypothesized that there would be a gender difference in corporal punishment, academic self-efficacy and drop-out in secondary school students. The findings suggested that boys experienced more corporal punishment than girls in secondary schools. Civil Rights Data Collection (2006) also found that “boys are subjected to corporal punishment at much higher rates than girls: nationwide, boys make up 78.3 percent of those paddled, while girls make up 21.7 percent”. Boys are exposed to corporal punishment more than girls in all the states where it is being used. It was also found in the current study that the boys were having higher drop-out rates than girls as consistent with previous findings (Al Ghanboosi & Alqahtani, 2013; Paepe, Zhu & DePryck, 2018; Dupere, Dion, Leventhal, Archambault, Crosnoe & Janosz, 2018). It was also found that girls showed higher academic self-efficacy as compared to boys (Su, Xiang, McBride, Liu & Thornton, 2016; Affuso, Bacchini & Miranda, 2017).

5. Conclusion

It is concluded in the light of the current study that corporal punishment showed a negative relationship with academic self-efficacy while it showed a positive relationship with drop-out in secondary school students. Gender differences were found regarding corporal punishment, academic self-efficacy and drop-out in secondary school students. Girls were higher in academic self-efficacy than the boys while boys were higher in corporal punishment and drop-out than the girls.

6. Limitations and Suggestions

- The sample size of the study was sufficient but not representative so for the future studies the sample size should be large so that results could be valid.
All the measures were self-reported. Qualitative research can explore more reasons associated with corporal punishment, academic self-efficacy and drop out in secondary school students.

The school authorities should minimize the use of corporal punishment for the maintenance of discipline and should introduce alternative approaches to deal with problematic behaviors.

The government should exercise effective rules especially in public schools where the students are exposed to punishment on a daily basis.

7. Implications

- Workshops can be organized by the government in the schools to introduce different methods to resolve the behavioral issues of the students instead of using physical punishment.
- The findings are beneficial for the child and school psychologists to resolve the behavioral problems of the students.
- The findings are also helpful to provide an insight into the reasons for high drop-out rate in schools.

References


https://schools.punjab.gov.pk/
https://www.srcd.org/


Sources of Social Support in Physical Activity Participation: The Moderating Effect of Gender

Ersin Eskiler¹ & Hüseyin Fatih Küşükibiliş²

¹Faculty of Sport Sciences, Sakarya University of Applied Sciences, Sakarya, Turkey
²School of Physical Education and Sports, Sivas Cumhuriyet University, Sivas, Turkey

ARTICLE INFO

Article History:
Received 26.07.2019
Received in revised form 22.08.2019
Accepted 28.08.2019
Available online 30.09.2019

ABSTRACT

The aim of this study was to investigate the relationship between sources of social support and motivation and the moderating effect of gender on this relationship for physical activity participation in adolescents. In this study, the relational screening model, one of the quantitative research method, was used. The research was carried out in accordance with the cross-sectional survey design. The data obtained were evaluated by SPSS 21.0. The research data were obtained from a total of 670 adolescents who were selected by convenience sampling method among secondary and high school students in Ankara, Bursa and Istanbul. As a data collection tool, the Physical Activity Participation Motivation Scale (PAPMS) developed by Tekkurşun Demir and Cicioğlu (2018) and consisted of 16 items and 3 sub-dimensions, was used. In order to determine the social support perceptions in physical activities of the students in the research, Social Support Scale for Physical Activity in Adolescents (SSSPA) which was developed by Farias Junior et al. (2014) and adapted to Turkish language by Küşükibiliş and Eskiler (2019) and consisted of 10 items and 2 sub-dimensions, was used. Our findings demonstrated that there was a positive relationship between physical activity participation and participants’ motivation in physical activity and their perceptions of parent and peer social support. Additionally, there was no statistically significant effect of gender interaction with perception of parental social support on physical activity participation motivation (t=1.36, p>.05). However, it was identified that peer social support perception and gender interaction had statistically significant effect on physical activity motivation (t=1.99, p<.05). The results indicate that as the perception of parent and peer social support increases, female students’ motivation to participate in physical activities increases more than male students. In other words, female students were more positively affected by parent and peer social support than male students. Consequently, adolescents’ social support for physical activities had positive effects on their participation and motivation.

Keywords:
Physical Activity; Motivation; Social Support; Gender

© 2019 IJPES. All rights reserved

1. Introduction

Technological product systems are developed and communication is increasing in the world and people are not surrounded by one another, do not interact with each other, they are surrounded by a virtual social network which is far from understanding each other and not realize their needs. The individual with social needs is faced with the threat of loneliness instead of socializing within the field of social networking such as the internet and social media. The expression of socialization does not exactly find meaning within the framework of a definition that places a distance between human and society. Socialization is the process which a person interacts with a group or community. In this way, the individual learn the lifestyle of the group and

---

¹ Corresponding author’s address: Faculty of Sport Sciences, Sakarya University of Applied Sciences, Sakarya, Turkey
Telephone: +90 264 616 03 39
Fax: +90 264 616 00 14
E-mail: eeskiler@gmail.com
http://dx.doi.org/10.17220/IJPES.2019.03.009

© 2019 International Journal of Psychology and Educational Studies (IJPES) is supported by Educational Researches and Publications Association (ERPA)
society in which he/she interacts and expresses himself/herself with his/her behaviors (Yetim, 2000; Şahan, 2008). Socialization, which has different meanings in terms of individual and society, is the most important tool of conveying culture while it is the field of developing a personality for the individual in the society (Küçük & Koç, 2004). While the individual develops his / her skills in the process of socialization, he/she becomes a member of the society in which he/she is involved and a part of a culture (Kaplan & Çetinkaya, 2015). Socialization is the product of an individual's needs (Maslow, 1970). In other words, the individual relies on social support resources to meet her/his needs, to cope with the difficulties of daily life and to realize herself/himself.

Physical activities are accepted as a sociological phenomenon with more than one person and direct interaction (Taşmekteşpitgil & İmamoğlu, 1996). Taking part actively or passively in physical activities constitutes an appropriate environment for the individual to share and develop socially. Physical activities are defined as a set of activities enabling the individual to gain a healthy life, as well as supporting him / her physical, mental and social development. (Tekkürşun Demir & Cicioğlu, 2018). The individual involved in physical activities finds the opportunity to communicate directly with other members of the society, and achieves different gains while developing his /her skills through movement.

Physical activities are the activities that people of all ages will benefit from due to its effects. Human needs continue to differentiate from childhood to old age and some needs stand out especially in certain age periods. Adolescence, which is one of the most critical stage of human being, is considered as the period in which social needs emerge. Adolescence is the period between childhood and adulthood in addition to rapid physical growth and social development. (Şahin & Özçelik, 2016). Biological and psychological development continues in this period until the individual is socially productive and finds her / her own identity. (Derman, 2008). Social development is expressed as an important stage for the adolescent who is seeking for identity (Koç, 2004). Furthermore, gender is an important variable in adolescence. Different physiological, psychological and developmental differences are observed between male and female adolescents from brain maturation to hormonal changes (Celik, Tahiroğlu & Avc, 2008). However, the participation of girls in physical activities compared to boys is limited due to family, environmental factors and community pressure (Aznar-Lain & Webster, 2007). Some studies have shown that girls are less active than boys and participation of both boys and girls in physical activities decrease during their lifetime (Sallis, 1993; Trost & Pate, 1999). Similarly, physical activity rapidly decreases from childhood to adolescence and this decrease is more dramatic for girls (Sallis, 1993; 2000; Slater & Tiggemann, 2011). Oliveira et al. (2014) state that the cognitive and emotional dimensions of social support are related to the participation of girls in physical activity. For this reason, it is important to identify the role of social support resources that encourage girls and boys to participate in physical activity and the level of motivation that contributes to their socialization.

Physical activities with their social impact offer a variety of opportunities for both female and male adolescents to habitually adopt the physically active lifestyle. Before starting an activity, the individual should have the desire or motivation to perform activity (Akbaba, 2006). Cüceloğlu (2005) note that motivation is a general concept that includes wishes, desires, needs, impulses, and interests. Individuals can acquire different sources of motivation for physical activity and participation in the sports (Tekkürşun Demir & İlhan, 2019). As with all aspects of life, the individual’s support is important for providing the motivation needed to participate in physical activity. These supports are generally social supports obtained by the immediate environment of the individual. Social support is more important for adolescents due to the prevention of various risks and the removal of constraints to their goals (Taş & Arslan, 2013). The social support of adolescents is composed of environments in which parents, friends and interact closely with other family members (Vietze et al., 2010). The individual receiving social support feels loved, respected, and cared by sources of social support (Cobb, 1976). Adolescents who receive social support for the participation of physical activities may also be motivated to participate in these activities by feeling valuable. Additionally, family environment (mother, father and siblings) and peers have considerable impact on physical activity participation (Anderssen & Wold, 1992; Cleland et al., 2005; Gustafson et al., 2006; Trost et al., 2003). Particularly, boys and girls are differentially affected by peers, thus this tendency leads to difference in physical activity participation (Anderssen & Wold, 1992; Aznar-Lain & Webster, 2007). However, further investigations are needed to evaluate the effects of sources of social support on physical activity participation motivations. In this context, the aim of the present
study is to determine the role of social support sources in physical activity participation motivations of adolescents and to reveal the effect of gender on physical activity participation motivations.

2. Method

2.1. Research model and Participants

In this study, the relational screen model, which is the one of the quantitative research method, was used. The research was conducted in accordance with the cross-sectional survey design (Creswell, 2012; Coşkun, Altunışık, & Yıldırım, 2017). The data of the study were collected from the students by the convenience sampling method among the secondary and high school students in Ankara, Bursa, and Istanbul and who volunteered to participate in this study. A total of 670 secondary school and high school students, 325 of participants were female (48.5%) and 345 were male (51.5%). The distribution of participants by physical activity, age and gender is summarized in Table 1.

Table 1. Distribution of the sample group by age, gender, and physical activity

<table>
<thead>
<tr>
<th>Variables</th>
<th>Age</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>Total</td>
</tr>
<tr>
<td>Physical activity</td>
<td>Gender</td>
<td>f (%)</td>
<td>f (%)</td>
<td>f (%)</td>
<td>f (%)</td>
</tr>
<tr>
<td>Female</td>
<td>49</td>
<td>53</td>
<td>41</td>
<td>33</td>
<td>176</td>
</tr>
<tr>
<td>Physically active</td>
<td>(27.8)</td>
<td>(30.1)</td>
<td>(23.3)</td>
<td>(18.8)</td>
<td>(100)</td>
</tr>
<tr>
<td>Male</td>
<td>34</td>
<td>77</td>
<td>59</td>
<td>97</td>
<td>267</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>130</td>
<td>100</td>
<td>130</td>
<td>443</td>
</tr>
<tr>
<td>Physically inactive</td>
<td>Gender</td>
<td>f (%)</td>
<td>f (%)</td>
<td>f (%)</td>
<td>f (%)</td>
</tr>
<tr>
<td>Female</td>
<td>43</td>
<td>44</td>
<td>40</td>
<td>22</td>
<td>149</td>
</tr>
<tr>
<td>Physically inactive</td>
<td>(28.9)</td>
<td>(29.5)</td>
<td>(26.8)</td>
<td>(14.8)</td>
<td>(100)</td>
</tr>
<tr>
<td>Male</td>
<td>17</td>
<td>20</td>
<td>21</td>
<td>20</td>
<td>78</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>64</td>
<td>61</td>
<td>42</td>
<td>227</td>
</tr>
</tbody>
</table>

2.2. Data Collection Tools

To collect the data, the “Physical Activity Participation Motivation Scale”, and the “Social Support Scale for Physical Activity” were used.

2.2.1. Physical Activity Participation Motivation Scale

This scale was developed by Tekkürşun Demir and Cicioğlu (2018) to determine the motivation levels of individuals in physical activities participation. The scale includes 16 items on sub-dimensions such as individual causes, environmental causes, and non-causality. This scale is a Likert-type scale with items scored between 1 and 5 from strongly disagree to strongly agree. In the develop study, according to CFA results, fit indexes were found as; $\chi^2$/sd=2.36, RMSEA=.06, AGFI=.88, NFI=.91, CFI=.95, GFI=.91, PNFI=.68, IFI=.95. The internal consistency coefficients of the scale for sub-dimensions (individual causes, environmental causes, and non-causality) were found .89, .86 and .82, respectively and Spearman Brown's two semi-reliability coefficients ranged from .76 to .89. In the current study, the internal consistency coefficient for the whole scale was .72 and sub-dimensions were .75, .68 and .83, respectively. Participants' high scores from the scale mean that their motivation to participate in physical activity is positive.

2.2.2. Social Support Scale for Physical Activity

To determine the level of social support that the perception of individuals in physical activities participation, Social Support Scale for Physical Activity was developed by Farias Júnior et al. (2014) and revised by Mendonça and Farias Júnior (2015) is a questionnaire assessing parents and peers provided some form of social support for physical activity. In the develop study, the internal consistency coefficients of the scale for sub-dimensions were found for parents $\alpha=.81$ and peers $\alpha=.90$ and the scale showed satisfactory levels of test-retest reliability (parents=.91, peers=.89). Turkish adaptation of this scale was performed by Küçükibiş and
In the adaptation study, according to CFA results, fit indexes were found as: $\chi^2$/df=1.82, RMSEA=.50, GFI=.96, AGFI=.94, NFI=.94; CFI=.97; TLI=.96. The internal consistency coefficients of the scale for sub-dimensions were .78 and .82, respectively. In the current study, the internal consistency coefficient for the whole scale .84 and sub-dimensions is .79 and .83, respectively. The scale consists of 10 items which are 4-point grading is used in the scale: “(0) never”, “(1) seldom”, “(2) often” and “(3) always”.

2.3. Statistical analysis

Statistical analysis was performed by the SPSS 21.0. The results of all variables in this study were determined by Cronbach’s alpha reliability test, descriptive statistics and correlations test. In addition, moderation analyses with Hayes process version 3.3 were conducted using Gaskin’s Stats Tools Package (Gaskin, 2016ab).

3. Results

The relationship between the physical activity participation and motivation and social support perceptions of adolescent was examined by correlation analysis. Descriptive statistics and correlation values of variables were shown in Table 2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Physical activity</th>
<th>Parents social support</th>
<th>Peers social support</th>
<th>Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>.356**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents social support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>.280**</td>
<td>.440**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>.000</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peers social support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>.000</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>.227**</td>
<td>.257**</td>
<td>.327**</td>
<td>1</td>
</tr>
<tr>
<td>p</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>$\bar{X} \pm Sd$</td>
<td>-</td>
<td>6.86±3.86</td>
<td>7.49±4.20</td>
<td>54.04±8.12</td>
</tr>
</tbody>
</table>

**p<.01

In Table 2, there was statistically significant relationship among all variables. When the relationship between physical activity participation and motivation was examined, it was found that the relationship between these two variables was low and positive ($r= .227$; $p<.01$). Similarly, there was a low positive correlation between peer social support and participation in physical activity ($r = .280$, $p <.01$), and a moderate positive correlation between parental social support and participation in physical activity ($r = .356$, $p <.01$). Additionally, there was a moderate/low positive correlation between sources of social support and motivation.

<table>
<thead>
<tr>
<th>Antecedents</th>
<th>Coeff.</th>
<th>SE</th>
<th>T</th>
<th>R</th>
<th>Adj.R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>54.011</td>
<td>.304</td>
<td>177.350</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents SS</td>
<td>.547***</td>
<td>.0788</td>
<td>6.937</td>
<td>.264***</td>
<td>.07</td>
</tr>
<tr>
<td>Gender</td>
<td>-.476</td>
<td>.609</td>
<td>-.780</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents SS X Gender</td>
<td>.214</td>
<td>.158</td>
<td>1.357</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>53.980</td>
<td>.298</td>
<td>181.129</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peers SS</td>
<td>.648***</td>
<td>.0710</td>
<td>9.122</td>
<td>.338***</td>
<td>.12</td>
</tr>
<tr>
<td>Gender</td>
<td>-.727</td>
<td>.596</td>
<td>-1.219</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peers SS X Gender</td>
<td>.283*</td>
<td>.142</td>
<td>1.994</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05, ***p<.001

The Hayes process version 3.3 (Model 1) analysis was conducted to determine the moderating effect of gender on the relationship between social support perception (parents and peers) and physical activity participation motivation. According to Table 3, the effect of the perception of parental and peer social support on participation in physical activity was found to be significant ($t=6.94$; $t=9.12$, $p<.001$). There was no statistically significant effect of gender on physical activity participation ($t=-.78$; $t=-1.22$, $p>.05$). Although the interaction
of perception of parent social support with gender did not have a statistically significant effect on physical activity participation motivation ($t = 1.36, p > .05$), the interaction of peer social support perception with gender was a statistically significant impact on physical activity motivation ($t = 1.99, p < .05$). Gaskin's Stats Tools Package Excel software was used to graphically visualize the obtained results in Figure 1.

![Graph showing relationship between social support and physical activity motivation](image)

**Figure 1:** Relationship between social support sources and physical activity participation motivation based on gender.

According to the results of the analysis, the relationship between parental and peer social support perceptions and physical activity participation motivation continues in the same direction. However, it is possible to state that female students' perception of social support caused greater physical activity participation motivation than male students. It can be stated that the perception of peer social support provides a higher level of physical activity motivation for female students than the perception of parental social support.

4. Discussion and Conclusion

In the current study, social support provided by parents and peers had a positive effect on the motivation of adolescents to participate in physical activity. Furthermore, it was found that adolescents were more positively affected by their peers' social support compared to their parents. Additionally, peer social support perception had a more positive effect on in physical activity participation motivation, especially in female students. Therefore, the perception of social support of parents and peers could be an important motivator for the physical activity participation of female students.

Our findings were supported by the findings of previous research indicating the impact of social support of parents and peers on adolescents’ physical activity behaviors. For example, Cirk et al. (2014) show that primary school five, six, seven and eighth-grade students are affected by different types of social support (parents, teachers, classmates, close friends and other people in school) according to their emotional relationship, attitude, role, and status. On the other hand, Tulunay Ateş (2016) states that teachers are the best indicators of social support perceived by a total of 561 eighth-grade students in Bartın and there is a significant relationship between perceived social support and internal and external motivation. In addition, Sallis et al. (2002) and Salvy et al. (2009) state that peers can increase the motivation of adolescents to participate in physical activities. As a result, increasing social support level perceived by students has a positive effect on motivation levels in the literature. In the current study, peers are a more important source of social support than parents on motivation for participation in physical activity. These findings could result from the development of autonomy and adaptation to the social environment of individuals in adolescence.

Gender is a feature that affects all of us in our daily lives. Our gender has an impact on the type of work we are likely to do, our career plans, and even our interests. Different studies demonstrate that women are more motivated to participate in sports through intrinsic motivations than extrinsic motivations (Colly, Berman, & Van Milligen, 2006). Ryan, et al. (1997) state that other factors that play a role in participation of individuals in the types of sport as well as the individuals are influenced by intrinsic motivations (participating in the sport for satisfaction) and external motivations (participating in the sport for rewards). Therefore, different studies have integrated the findings of Ryan et al. (1997) of intrinsic and extrinsic motivation and gender-related motivational differences (Rintaugu & Ngetich, 2012; Colly et al., 2006).

In the literature, the value given by children to sports activities varies according to gender and these differences occur at a relatively early age in schools (Duigle, 2003; Eccles et al., 1993; Xiang et al., 2001). Eccles
et al. (1993) show that boys in the first, second and fourth-grade boys are more interested in sport activities than girls. Xiang, et al. (2001) state that gender differences affect physical activity participation in primary school children. Boys are more willing to participate in physical education classes/activities than girls in the second and fourth grade. These studies indicate that children will continue physical activity as they getting older, when they give high value to their physical education classes or are motivated. Additionally, boys and girls do not show the same interest in physical activity participation. For example, Bailey et al. (2005) and Wilkinson and Bretzing (2011) show that participation of girls in physical activity decreases while getting older. In summary, participation of girls in physical activity decreases from primary school to university and is affected by family, friends, teachers, social perceptions, and other factors (Wellard, 2011).

There is a limited study evaluating gender-related changes in physical activity participation motivation for adolescents. Hunuk et al. (2013) found significant difference between perceived social support providers (mother, father and friends) and different school types (private-state) and gender according to their physical activity levels among 266 secondary school students in six, seven, and eight-grades. They indicate that individuals in this age group are received more support from their peers than their families, but perceived social support from family, especially from mother, plays a decisive role in physical activity participation. Thus, perceived social support in physical activity participation has identified significant differences in terms of school type and gender dimension. On the other hand, gender differences are found to be effective in the motivation of university students to participate in physical activity in other studies (Egli et al., 2011; Gao & Xiang 2008; Lauderdale et al., 2015). According to Lauderdale et al. (2015), gender differences have a significant impact on physical activity and motivation in 96 university students (33 males, 63 females 18-24 years) and males respond more positively to intrinsic motivation. On the other hand, Rintaugu and Ngetich (2012) determine that the factors that motivate participation in sports and exercise depending on gender in a total of 50 students (30 male and 20 female) from faculties of sports science. In the present study, when the relationships between physical activity participation motivation and social support resources were examined, it was noteworthy that there was a significant difference between male and female with low social support perceptions (both parents and peers). In other words, physical activity participation motivation of females with low social support perception was found to be much lower than males. In addition, when the participants with high social support perceptions were investigated, although the motivation of females to participate in physical activity was less than males, the difference was not as high as in adolescents with low social support perceptions. On the other hand, the results showed that both parents and peer social support perceptions had a much more important effect on females in terms of physical activity participation motivation than males.

Furthermore, there was no interaction between gender and parental social support when the results of the analysis of the moderating effect of gender on the relationship between the study variables were examined. However, as the social support of parents increases, it is possible to state that there is a significant increase in physical activity participation motivation for both males and females. Moreover, it was found that the perception of parental social support of females had a more significant effect on their motivation than males in physical activity participation. According to the results of the analysis, parental social support explained the motivation of participation in physical activity by 26%. Another finding of the study was that the interaction between peer social support perception and gender was statistically significant. A combination of these two variables explained the motivation for physical activity participation by about 34%. Our findings demonstrated that female adolescents generally have more respect for the peer social support they receive than males. In other words, peer social support could be a much more important motivational factor for females than males. According to the results of moderating effect analysis, it can be state that perceptions of peer social support were relatively more motivated to participate in physical activity than their perceptions of parental social support for females. The high perception of social support of peers for female adolescents can be interpreted as being directed towards their peers and friends in an autonomous way rather than family. On the other hand, physical activity participation motivation was not very much influenced by parental and peer social support for males, and motivation sources may be interpreted as being influenced by more personal or different external factors. Indeed, Molloy et al. (2010) state that males (42%) were more likely to continue physical activity compared to females (33%) in terms of perceptions of social support due to gender-related differences.
As a result, it can be stated that parental and peer social support play an important role in developing positive attitudes towards physical activities and adopting a physically active lifestyle. In the dissemination of a physically active lifestyle, individuals in childhood and adolescence represent an important audience. The knowledge, skills, and attitudes learned/acquired during these periods can directly influence participation behaviors/social motivations of physical activity in adulthood and later period. In this context, the acquisition of physical activity habits of adolescents is a process that starts first from the family, and peer ideas begin to gain importance in the later period. Therefore, social support is an important structure to investigate the level of social support that adolescents receive from individuals in their social network is associated with physical activity participation.

When the positive effects of adolescent individuals receiving social support for physical activities on motivation and participation in physical activity are evaluated, it is necessary to increase the social support provided to individuals in this period and to conduct studies in this direction. However, it should not be ignored that male adolescent’s motivational sources should be revealed more clearly and new studies should be carried out in order to increase the participation of male adolescents in physical activity. Additionally, understanding the gender differences in physical activity motivation and determining the relationship between motivation and physical activity can lead to the creation of programs where health and exercise professionals can provide more external motivation in individuals for exercise. In particular, since females have less motivation for physical activity and are less involved in sports (Anderssen & Wold, 1992; Aznar-Lain & Webster, 2007), it is necessary to determine the factors that provide motivation for participation and improve participation of females in physical activity. Further studies are needed to assess the impact of other sources of social support sources (e.g. teachers, athletes, and idea leaders) on physical activity participation and the multiple dimensions of social support. Finally, the relationship between physical activity and other potential mediators of social support (e.g. age, and social class) needs further investigation.

References


The Effect Of Psycho-Education Program On Increase The Tendency To Forgive and Five Factor Personality Properties Of Forgiveness Tendency

Fatma Firdevs Adam Karduz¹ & Ali Haydar Şar²

¹MEB Serdivan Nillifer Is Uygulama Okulu, Sakarya, Turkey
²Sakarya University Faculty of Education, Hendek, Sakarya, Turkey

ARTICLE INFO

ABSTRACT

The basic aim of this study is to examine the effect of psycho-education program for gaining the tendency to forgive on Big five personality traits. The study was carried out via experimental design to determine the cause and effect relationship between the independent variable (big five personality traits) and the dependent variable (tendency to forgive). The study was conducted with Pretest-Posttest Control Group Design. 24 university students who attended to the study were randomly assigned to the experimental and the control group each of which consisted of 12 university students. The data was collected through Big Five Personality Traits Scale and Heartland Forgiveness Scale. Within the scope of the study, experimental group was given 10-week psycho-education program to gain positive personality traits and to gaining forgiveness tendency while control group was not given any intervention. The effectiveness of the group counseling process was tested by the same scale in pre-experimental, post-experimental and follow up processes. According to the findings of the study, it was found that all of the personality traits were effective in order to help to increase the tendency of forgiveness of individuals with high scores for neuroticism, one of the big five personality traits, and low scores for forgiveness, that is people with less forgiveness competency. The findings were discussed in the light of the literature and recommendations were made accordingly.

Keywords:
Five factor personality characteristics, tendency to forgiveness, psycho-education program.

1.Introduction

Forgiveness has existed since the beginning of human history (McCullough, 2008) and for many years, human relations and past experiences were deemed important for the underlined mechanisms of forgiveness in interpersonal relations (McCullough, Root, Tabak, & Witvliet, 2009). There is considerable research in psychology, particularly in positive psychology, about the concept of forgiveness (Lopez and Snyder, 2009). However, scientific studies on forgiveness began in the mid-1980s and have continued since then (Worthington, 2005).

In order to understand forgiveness correctly and accurately, it is necessary to perceive unforgivingfirst. Worthington and others define unforgiving as a combination of negative feelings (i.e. anger, anguish, revenge, hatred, and fear) on the person who makes a mistake (Worthington, Sandage, Berry, 2000; Worthington, Wade, 1999). Forgiveness is the result of many different circumstances that arise from different problems. Therefore, most of the definitions are case-specific, so it is difficult to make a definition that is common and acceptable to all the situations (Toussaint and Webb, 2005). Forgiveness could be in the form of self-forgiveness (Hall and Fincham, 2005), interpersonal forgiveness (Enright, Friedman and Rique, 1998), forgiving God, forgiveness from God (Exline, Yali and Lobel, 1999), forgiving families (DiBlasio and Proctor, 2019).
1993) or forgiving the entire society and culture (Sandage, Hill, and Wang, 2003). Theorists such as Enright and The Human Development Study Group (1991), Enright (1996), Enright and Fitzgibbons (2000), Ferch (1998), Worthington (1998) have developed a number of theories to define forgiveness. Forgiveness is the cognitive renunciation decision about the desire to take revenge against the blame/offender and the abandonment of negative thoughts (Fitzgibbons, Enright and O’Brien, 2004). Forgiveness is the ability to show compassion in the moral framework against the unfair and uncomfortable attitude of the misdeemeanor (Freedman, Enright, & Knutson, 2005). Forgiveness is not only about reducing negative attitudes, feelings, motives and behaviors towards the person who makes mistakes, but also increasing positive feelings and perspectives (wider perceptions) such as empathy, hope or compassion (Harris, Thoresen, 2005).

Forgiveness plays an important role in sustaining social relations, preventing unnecessary conflicts and the ability to correctly sustain life (Noreen et al., 2014). In this context, it is thought that an increase in both individual and social tendencies of forgiveness will lead a healthy interpersonal relationship and interaction and an increase in social peace and prosperity, and an elevated contribution to psychological well-being and positive personality traits.

Forgiveness is regarded as an interpersonal process to maintain human relationships and improve the quality of interaction (Tsang et al., 2006; Worthington et al., 2007). Causes of forgiveness (Mullet and Girard, 2000), and the socio-psychological structure of forgiveness have been investigated (McCullough et al., 1998). Nonetheless, individual differences affecting forgiveness have not been evaluated in-depth. Thus, researchers have initiated studies targeting the relationship between forgiveness and personality traits and have linked the criteria for forgiveness to the personality traits (McCullough and Hoyt, 2002). Most of the studies on the characteristics of forgiveness focus on the differences in the five-factor model of personality (Emmons, 2000). In order to explain the relationship between personality traits and forgiveness, it is thought that a person’s views on behaviors s/he is inclined to, injustices the person exposed to, and the way s/he has a relationship are important factors (McCullough and Hoyt, 2002). There is a growing body of psychology literature examining the nature of forgiveness in order to understand the general tendency to forgive or unforgiving circumstances (Berry, Worthington, Parrott, O’Connor, and Wade, 2001; Brown, 2003; Walker and Gorschuk, 2002). In particular, researchers are interested in defining the dimensions of the basic personality traits associated with forgiveness and better understanding the underlying personality-based mechanisms in order to better predict forgiveness behavior (McCullough, 2001). As a result of research spanning many years, a consensus on the general classification of the “Big Five Personality Traits” has reached (John and Srivastava, 1999).

Somer, Korkmaz and Tatar (2002) formed 15 sub-dimensions that could be grouped under five main factors for measuring the homogeneous personality traits.

Extraversion (Extraversion, Energy, Enthusiasm): Extraversion-Introversion: The characteristics of this factor are very similar to Eysenck’s extraversion dimension and include traits such as being vibrant, excited, cheerful, talkative, sociable, and clubby. Extraversion is more related to the amount of social stimuli in interpersonal relationships. In addition, sociality and outgoingness, fun, love, leadership, power, willingness and friendly behavior also represented in this factor.

Neuroticism (Emotional Imbalance, Neuroticism, Negative Impact, Irritability): Emotional Stability-Instability: McCrae and Costa (1987) pointed out that negative feelings such as nervousness, anxiety, depression, anger, distrust, and distress are on the bases of neuroticism. Matthews, Derryberry and Siegele (2000) describe neuroticism as non-rational, unrealistic automatic thoughts, and failure in coping mechanisms.

Agreeableness (Compatibility, Altruism, Love): Agreeableness – Hostility: On the positive side of this factor, there are features such as gentle, subtle, respectful, safe, flexible, open-hearted and compassionate. The agreeableness dimension is also a key factor in interpersonal relationships. Researchers define this factor with trust, honesty, amity, obedience, humility, and compassion. People who are high in agreeableness are those who love others, sharing, and are socially caring.

Conscientiousness (Self-discipline, Control, Self Restriction): Responsibility–Undirectedness: Costa, McCrae and Dye (1991) used the concept of direction to define this factor. Because they indicate that this dimension
has both progressive and inhibiting aspects. The progressive aspects of this factor appear in traits such as the need for success and action, the persistence in working whereas the inhibiting aspects are present in the traits such as the orderliness, meticulousness, and precaution. To represent this factor, competence, order, meticulousness, hard worker, goal oriented, self-discipline, and precaution sub-dimensions were proposed (Somer et al. 2002).

Openness (Openness to Experience, Novelty, Open mindedness) Openness to Experience/Intellect: The fifth factor is the least agreed on the model. This factor has been named as intellect by some researchers, culture by others, and openness to experience by others. Descriptive traits of the factor include analytical, sophisticated, curious, independent, creative, liberal, non-traditional, original, imaginative, wide-ranging, brave, loving change, artistic, open-minded adjectives (Somer, Korkmaz and Tatar, 2002).

Person who succeeded in forgiveness and accomplish empathy for the guilty/offender and his/her actions/wrongdoings can be positively affected both mentally and physically. Because at the end of forgiveness, socialization is ensured, interpersonal relations are improved, healthy behavior emerges and this improves the mental health (Berry et al., 2005). In experimental studies, it was observed that neurotic personality trait prevented forgiveness (Ashton et al., 1998). In fact, this is not surprising, because the most important symptom of neuroticism is the hostile attitude or the feeling of revenge that is a significant factor prevents forgiveness (McCullough and Worthington, 1999). Being intertwined with society (being in social environments) involves the risk of being hurt by others. Such offensive situations/misdemeanors occur in the relationship between at least two persons: it is necessary to avoid hurt-hurt and revenge (McCullough, 2001).

According to McCullough, Worthington, and Rachal (1997), when individuals forgive the offending situation/guilt they experience in their interpersonal relationships, they turn their feelings of revenge and harm into positive emotions, thus increasing the likelihood that their relationship with the accused person becomes more coherent and positive. In this context, the psycho-education program which is prepared and applied in this study is important because aims decrease the neuroticism score, which is one of the big five personality traits, and thereby increase the forgiveness tendency.

1.1. Aim of the study

The study tested the following research hypotheses.

Main Hypothesis: The prepared psycho-education program is effective in increasing the tendency to forgive.

Sub-hypotheses:

Hypothesis 1: The structured psycho-education program focusing on forgiveness tendency is effective in increasing the levels of “openness to experience, responsibility, extraversion, agreeableness” from the big five personality traits of individuals.

Hypothesis 2: The structured psycho-education program focusing on forgiveness tendency is effective in reducing the neuroticism levels of the big five personality traits of individuals.

Hypothesis 3: The psycho-education program focusing on forgiveness tendency is effective in increasing the level of “self-forgiveness, forgiveness of others and forgiveness of the situation.”

Hypothesis 4: Structured psycho-education program focusing on forgiveness tendency is effective in increasing the general level of forgiveness of individuals.

2. Methods

As a part of the study, a structured psycho-education program consisting of 10 weeks was conducted by the researcher to increase the tendency of forgiveness among the participants of the study group. The big five personality traits of individuals as content in these sessions which can be described as the ‘openness to experience’, ‘conscientiousness’, ‘extraversion’, ‘agreeableness’ and ‘neuroticism’ levels with the ‘Self Forgiveness’, ‘Forgiving Others’, ‘Forgiving Situation’ and Heartland Forgiveness Scale scores are aimed to be improved. In order to determine the level and degree of effectiveness of the psycho-education program sessions, the ‘pre-test, post-test and follow-up-test’ were applied to the experimental and control groups with a randomized design. The application carried out by the researcher is defined as a randomized design of 2x3.
In such studies, measurement tools are applied to the sample group randomly determined by the researcher and the results are evaluated. After the experimental and control groups were determined, pre-test was applied to the experimental and control group by the researcher. While the psycho-education program is applied to the experimental group, nothing was applied to the the control group. At the end of the study, the test instrument was applied to both experimental and control groups and the effectiveness of psycho-education was investigated. After a certain period of time following the post-test, both the experimental and the control groups are subjected to a follow-up test and the process was concluded.

2.1. Working group

The participants of the study consisted of the students enrolled to Sakarya University Faculty of Education in 2016-2017 academic year. While the students were selected by the researcher, no specific criteria were superimposed, the measurement tools were randomly applied to a sample group of 513 participants. Then, 24 students who were determined by unbiased appointment from 55 participants with low scores in forgiveness tendency and Positive Personality structure. In total, a group of 24 students pursuing the 3rd and 4th year were selected. There were 6 females and 6 males in the experimental group, 11 females and 1 male in the control group. In other words, the study consists of 17 female and 7 male students.

2.2. Data Collection Tools

2.2.1. Personal Information Form

The researcher prepared a personal information form and applied it to the participants so as to gather data from the gender, year in college, perceived academic success, socio-economic levels, and presence of psychological support in their lifetime.

2.2.2. The Five Factor Personality Inventory

Benet-Martinez and John (1998) developed “The Big Five Inventory” that is consists of 44 items and “neuroticism”,”agreeableness”, “openness to experience”,“extraversion”, and “conscientiousness” dimensions. The scale includes 8 items from each of “neuroticism” and “extraversion”, 9 items from “agreeableness” and “responsibility”, and 10 items from “openness to experience”.

Twelve out of the the 44 items of the five-factor personality scale are scored were inversed.

Adaptation of the scale to Turkish was done by Somer and Somer (2005). The Cronbach’s alpha reliability coefficients of the main study of the scale for the “neuroticism”, “extraversion”, “openness to experience”, “agreeableness”, and “conscientiousness” factors were 0.79, 0.77, 0.76, 0.70, and 0.78, respectively. The Cronbach’s alpha values of the five factor personality inventory in this study for the sub-dimension of conscientiousness was 0.897, for the agreeableness sub-dimension was 0.818, for the neuroticism sub-dimension was 0.823, for the sub-dimension of experience was 0.801, for the extraversion sub-dimension was 0.861, and for the total five-factor personality scale was 0.847.

2.2.3. Heartland Forgiveness Scale

The scale was developed by Thompson et al. (2005) and the translation and adaptation to Turkish was conducted by Bugay and Demir (2010). The Heartland Forgiveness Scale consists of 18 items. The scale is structured as 7-point style and each item is answered by the participants. The scale consists of three sub-dimensions: “Self-forgiveness”, “Forgiving others” and “Forgiving the situation”.

Cronbach alpha reliability coefficient of the Turkish version of the scale for self-forgiveness sub-dimension was 0.64, the coefficient for the forgiving others sub-dimension was 0.79, for forgiving the situation sub-dimension was 0.76. The Cronbach alpha value for the entire scale was calculated as 0.81. In addition to this, Exploratory and Confirmatory Factor Analysis was performed in order to test the sub-dimensions of the scale at the local level and the obtained values were found at the appropriate level (GFI = 0.92, AGFI = 0.90, RMSEA=0.06). The Cronbach alpha value was 0.841 for the self-forgiveness subscale, 0.738 for the forgiving others subscale, 0.911 for the forgiving the situation, and 0.853 for the entire Heartland Forgiveness Scale in this study.
Bugay and Demir (2012) investigated the simultaneous validity and reliability of the Rumination Scale Short Form and Life Satisfaction Scale in different. They reported the correlation between the self-forgiveness sub-dimension and the rumination scale as -0.32, between the forgiving others sub-dimension and the rumination scale -0.09, between the forgiving situation and rumination scale -0.34, the total score between forgiveness and the rumination scale as -0.31. The also found that the correlation coefficient between self-forgiveness and life satisfaction was 0.26, between forgiving others and life satisfaction was 0.10, between forgiving situation and life satisfaction was 0.34, and correlation between forgiveness total score and life satisfaction was 0.31. The findings revealed that the Turkish form of the Heartland Forgiveness Scale had a simultaneous validity (Bugay and Demir, 2012).

2.2.4. Process
A structured psycho-education program consisting of 10 sessions of 120-150 minutes per week was conducted by the researcher for the participants in the experimental group. The organized sessions were completed regularly and systematically without any problems. No application was executed to the participants in the control group.

3. Results
In order to determine which data analysis technique will be used while evaluating the data obtained from by the researcher, a normality test was applied to the scale scores obtained from the 45-item Five Factor Personality Scale and the Heartland Forgiveness Scale, which is formed in 18 items. In other words, it is aimed to determine whether a parametric test should be applied.

In order to be able to apply the parametric tests in which the data is normally distributed, the pre-test results of the scales applied to the experimental and control groups, the kurtosis, and skewness values should be calculated. The pre-test data obtained from the scales are shown in the table below.

**Table 1.** Five Factor Personality Scale of Experimental and Control Groups; Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism Sub-Dimensions and Self-forgiveness, Forgiving Others and Forgiving the Situation Sub-dimensions of Heartland Forgiveness Scale.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Group</th>
<th>n</th>
<th>Ss</th>
<th>Median</th>
<th>Mode</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness to experience</td>
<td>Experimental</td>
<td>12</td>
<td>31.25</td>
<td>6.83</td>
<td>31.00</td>
<td>31.00</td>
<td>-0.088</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>12</td>
<td>30.83</td>
<td>3.73</td>
<td>29.50</td>
<td>31.00</td>
<td>0.533</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Experimental</td>
<td>12</td>
<td>20.08</td>
<td>5.97</td>
<td>27.50</td>
<td>26.00</td>
<td>-0.134</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>12</td>
<td>19.25</td>
<td>4.33</td>
<td>23.50</td>
<td>24.00</td>
<td>-1.063</td>
</tr>
<tr>
<td>Extraversion</td>
<td>Experimental</td>
<td>12</td>
<td>15.00</td>
<td>6.60</td>
<td>20.00</td>
<td>14.00</td>
<td>0.102</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>12</td>
<td>14.25</td>
<td>5.08</td>
<td>16.00</td>
<td>16.00</td>
<td>-0.244</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>Experimental</td>
<td>12</td>
<td>28.50</td>
<td>2.96</td>
<td>31.00</td>
<td>33.00</td>
<td>-0.862</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>12</td>
<td>25.58</td>
<td>3.94</td>
<td>26.50</td>
<td>25.00</td>
<td>0.651</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>Experimental</td>
<td>12</td>
<td>30.25</td>
<td>2.63</td>
<td>31.00</td>
<td>30.00*</td>
<td>-0.182</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>12</td>
<td>25.50</td>
<td>5.76</td>
<td>26.00</td>
<td>20.00*</td>
<td>0.543</td>
</tr>
<tr>
<td>Self-forgiveness</td>
<td>Experimental</td>
<td>12</td>
<td>17.25</td>
<td>6.13</td>
<td>17.50</td>
<td>6.00*</td>
<td>-0.383</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>12</td>
<td>24.75</td>
<td>9.30</td>
<td>25.50</td>
<td>32.00</td>
<td>-0.260</td>
</tr>
<tr>
<td>Forgiving Others</td>
<td>Experimental</td>
<td>12</td>
<td>20.50</td>
<td>6.94</td>
<td>29.00</td>
<td>21.00*</td>
<td>-0.020</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>12</td>
<td>20.83</td>
<td>7.43</td>
<td>21.50</td>
<td>24.00</td>
<td>-0.189</td>
</tr>
<tr>
<td>Forgiving the Situation</td>
<td>Experimental</td>
<td>12</td>
<td>24.66</td>
<td>5.59</td>
<td>23.00</td>
<td>23.00</td>
<td>-0.142</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>12</td>
<td>23.41</td>
<td>7.51</td>
<td>22.00</td>
<td>13.00*</td>
<td>0.210</td>
</tr>
<tr>
<td>Heartland Forgiveness Scale</td>
<td>Experimental</td>
<td>12</td>
<td>62.41</td>
<td>14.28</td>
<td>74.00</td>
<td>60.00*</td>
<td>0.258</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>12</td>
<td>69.00</td>
<td>22.07</td>
<td>63.00</td>
<td>56.00</td>
<td>-0.104</td>
</tr>
</tbody>
</table>

*The smallest value due to multimodality
Table 2. Experiment and Control Group Openness, Conscientiousness, Extraversion, Compliance, Sub-Dimensions and Self-forgiveness, Forging Others and Forging the Situation Sub-dimension and Total Score of Heartland Forgiveness Scale of Pre-Test Measurest-Test Analysis Results

<table>
<thead>
<tr>
<th>Scale</th>
<th>Experimental</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Ss</td>
</tr>
<tr>
<td>Openness to experience</td>
<td>12</td>
<td>31.25</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>12</td>
<td>20.08</td>
</tr>
<tr>
<td>Extraversion</td>
<td>12</td>
<td>15.00</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>12</td>
<td>28.50</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>12</td>
<td>30.25</td>
</tr>
<tr>
<td>Self-forgiveness</td>
<td>12</td>
<td>17.25</td>
</tr>
<tr>
<td>Forgiveing Others</td>
<td>12</td>
<td>20.50</td>
</tr>
<tr>
<td>Forging the Situation</td>
<td>12</td>
<td>24.66</td>
</tr>
<tr>
<td>Heartland Forgiveness Scale</td>
<td>12</td>
<td>62.41</td>
</tr>
</tbody>
</table>

The five factor personality scale and Heartland Forgiveness Scale used in the study and the skewness and kurtosis values of these subscales were found to be between -1.96 and +1.96 according to the 5% significance level. In this respect, it can be assumed that all preliminary measurements obtained are normally distributed.

When the results of the t-test for difference of total pre-test scores between control and experimental group indicated in Table 2 are considered, no statistical difference was evident in 'Openness to Experience', 'Conscientiousness', 'Extraversion', 'Agreeableness', 'Neuroticism', 'Self-forgiveness', 'Forgiving Others', 'Forgiving the Situation' and 'Heartland Forgiveness Scale' (t[22]=1.519, p>0.05 for the 'Experience to Openness' sub-dimension score, t[22]=2.778; p>0.05 for the 'Conscientiousness' sub-dimension score; t[22]=1.535; p>0.05 for the 'Extraversion' sub-dimension score; t[22]=2.047; p>0.05 for 'Agreeableness' sub-dimension score, t[22]=2.598; p>0.05 for the 'Neuroticism' sub-dimension score; t[22]=2.331; p>0.05 for 'Self-Forgiveness' sub-dimension score; t[22]=3.632; p>0.05 for 'Forgiving Others' sub-dimension score; t[22]=0.462; p>0.05 for 'Forgiving the Situation' and t[22]=0.567; p>0.05 for 'Heartland Forgiveness Scale' total score). When the findings are examined, both the experimental and control groups were similar in terms of total scale scores and all sub-dimensions prior to the psycho-education program.

Based on all the obtained values, all conditions required for two-way analysis of variance were met in the process of analyzing the hypothesis. Based on this, variance analysis technique was used for repetitive measurements to analyze the data obtained from the participants as a result of the psycho-education program. SPSS 21.00 Windows Package program was used in data analysis and significance level of p<0.05 was considered throughout the experiment.

4. Discussion and Conclusion

In this study, the effect of the psycho-education program on the tendency to forgive and the effect on the five-factor personality traits were investigated. Some hypotheses were developed and tested for this purpose.

The structured psycho-education program focused on increasing forgiveness were demonstrated to be effective in increasing the levels of ‘openness to experience, conscientiousness, extraversion, and agreeableness’ which are among the big five personality traits of individuals. It was observed that structured psycho-education program focusing on elevating the forgiveness tendency is effective in increasing the level of ‘openness to experience’ of individuals. According to this result, the level of ‘openness to experience’ increases as the tendency to forgive increases. This may be due to the fact that individuals with this character have tendency to participate in social activities, be open to different emotions and intellectual thoughts.
between feature forgiveness to research, being significantly resistant to change (Benet-Martinez and John, 1998; Costa and McCrae, 1995; Somer et al., 2002). The openness dimension can be considered to facilitate forgiveness. However, in many studies, there is no relationship between openness to experience and forgiving others (Ashton et al., 1998; McCullough and Worthington, 1999; Ross et al., 2004; Walker and Gorsuch, 2002). On the other hand, in a different study, a negative correlation between the degree of openness and forgiveness was reported (Ajmal, Amin and Bajwa, 2016). It was also reported that openness to experience was only related to positive effect (Watson and Clark, 1992) but not to any of the dimensions of forgiveness (Walker & Gorsuch, 2002). The reason for this is that people with openness do take the risk to try new things (Ajmal, Amin and Bajwa, 2016) and do not to hesitate to express their emotions, which is a factor that reduces the forgiveness attitude because they are not hesitant to openly utter the reasons for their intimidation when they are exposed to a wrongdoing.

The degree of openness is negatively correlated with the tendency to take revenge, which reduces the tendency to forgive (Rey and Extremera, 2014). In addition, it is reported that individuals with openness have low scores of forgiveness and gratitude (Ajmal, Amin and Bajwa, 2016). In addition, according to the findings obtained from the study of Doğan (2012) examining the relationships between personality traits and subjective well-being, a significant positive correlation between personality openness and subjective well-being were found. A positive correlation between the tendency to forgive and openness, agreeableness, extraversion (Berry, Worthington, Parrott, O’Connor and Wade, 2001), conscientiousness (Walker and Gorsuch, 2002), and a negative correlation with rumination, hostility (Berry et al., 2001) and depression (Toussaint, Williams, Musick and Everson-Rose, 2008) was reported. However, in Walker and Gorsuch’s (2002) study, it was found that there was no correlation between openness to experience and forgiveness.

It has been observed that the structured psycho-education program which focuses on increasing the forgiveness tendency is effective in increasing in ‘conscientiousness’ levels of individuals. According to the results, the level of conscientiousness increases as the tendency to forgive increases. This may be due to the fact that individuals with responsibility have better control over their emotions (John, Naumann and Soto, 2008), and in particular their ability to effectively control the expression of their negative feelings where necessary. There are studies supporting this result. In Shepherd and Belicki’s (2008) study, a positive correlation was found between forgiveness and responsibility, which is the dimension of responsibility and diligence (diligently working). In other words, restrictive self-control and self-discipline/responsibility (reflecting responsibility and diligent traits, respectively) supports forgiveness. This is due to the nature of the responsibility which includes working diligently, persistently, with a self-discipline, and in a hard-working way mainly through the the internal and automatic behavior nature of the responsibility of individuals (Ajmal, Amin and Bajwa, 2016) that also leads them to program their lives according to goals and the work plan. Forgiveness actually requires emotional control. It can be stated that people with self-discipline could be more forgiving as they can control their feelings more easily. Perhaps it may be thought that these qualities are transformed into efforts to maintain interpersonal interaction and relationships. McCullough et al. (1997) found that those who could control their impulsive behaviors were less likely to be reckless and to halt the process of forgiveness. In another study, a positive correlation between the dimension of responsibility and forgiveness was found (Ajmal, Amin and Bajwa, 2016).

Rey and Extremera (2014) showed that individuals with high scores in responsibility dimension had a significantly reduced tendency to take revenge. In addition, the responsibility has a positive correlation with forgiveness and gratitude (Ajmal, Amin and Bajwa, 2016). A significant positive correlation was reported between responsibility and subjective well-being (Doğan 2012).

However, no significant correlation was reported between the extent of responsibility and forgiveness in some studies (Ashton et al., 1998; Ross et al., 2004). According to the findings of Watson and Clark (1992), the dimension of responsibility is related only to the positive effects; however, it was not associated with any of the dimensions of forgiveness (Walker and Gorsuch, 2002). As it can be deduced from the results of previous research, there are also results contradicting to the findings of the present study.
It is observed that structured psycho-education program which focuses on gaining forgiveness tendency is effective in increasing the “extroversion” of individuals. According to the findings, the level of extraversion increases as the tendency to forgive increases. This may be due to the fact that people with this characteristic are more inclined to positive feelings that in turn makes act of forgiving easier (Chamorro-Premuzic, 2007). Individuals with extroversion traits have a more forgiving attitude and therefore live happier lives and are generally positive, active and courageous people who enjoy taking risks and making friends. The people with the oppositetrats of the extroversion have a weak social ability, are silent and unwilling to do anything (Costa and McCrae, 1992). The previous research supports the finding of this current study. The forgiveness level of those with high extraversion scores was also high (Berry et al. 2001; Ajmal, Amin and Bajwa, 2016).

There was a positive correlation between extraversion dimension and general forgiveness. In other words, being more optimistic and having positive feeling encourage forgiving behaviors (Shepherd and Belicki, 2008). Furthermore, the extraversion dimension has a strong relationship with both positive effect and seeking support (Watson and Clark, 1992; Watson and Hubbard, 1996). Individuals with extraverted personality traits tend to have high levels of forgiveness and gratitude as they are concerned about their social image (Ajmal, Amin and Bajwa, 2016). This is because extraversion individuals may be very competent and friendly and receive their energies from people around them. They like to meet and gather with different individuals. Therefore, they tend to be more forgiving in order to be forgiven during their relationship with others (Costa and McCrae, 1992). In addition, a positive significant correlation was found between extraversion personality characteristic score and subjective well-being (Doğan 2012) which is consistent with the findings of this study.

The structured psycho-education program which focuses on gaining forgiveness tendency was effective in increasing the “agreeableness” levels of individuals in the present study. This is because people with this characteristic may be more inclined to forgive in their interpersonal relationships because they are friendly, social and trustworthy (Glass, Prichard, Lafortune and Schwab, 2013). The agreeableness factor of the Five-Factor Model is one of the dimensions that has a strong correlation with forgiveness (Mullet, Neto and Rivière, 2005). Agreeableness dimension is one of the big five personality traits and includes features such as helpful, cooperative, soft-minded, understanding, adaptable to the conditions, reliable, and empathic (Goldberg, 1990). The agreeableness dimension is related to good modesty, self-sacrificing, flexible, sympathetic, and forgiveness (McCrae and Costa, 1987). Agreeableness is related to forgiveness, because forgiveness is seen as a social and altruistic act (Ashton, Paunonen, Helmes, & Jackson, 1998; McCullough, 2001) and is associated with empathy and goodwill in different terms (McCullough, Worthington, & Rachal, 1997). Many experimental studies have supported these intuitive and conceptual relationships (Mullet et al., 2005). According to Shepherd and Belicki’s study (2008), agreeableness was the most important predictor of forgiveness. In experimental studies, there is generally a positive correlation between agreeableness and forgiveness (Ashton et al. 1998; McCullough and Worthington, 1999; Ross et al., 2004; Mullet et al., 1999). Wang’s (2008) findings of the study showed that individuals with a high level of agreeableness have a higher tendency to forgive. So agreeableness is a feature that promotes forgiveness (Worthington, 1998). Furthermore, the agreeableness dimension in the studies shows a consistent positive correlation in many forgiveness measurement tools (McCullough and Hoyt, 2002; Berry, Worthington, Parrott, O’Conner, and Wade, 2001; Brose et al. 2005; McCullough et al. 2001).

In addition, individuals with a high tendency to forgive have been found to be mostly emotionally balanced and have agreeableness personality traits (Ajmal, Amin and Bajwa, 2016). This may be due to the fact that individuals with agreeableness traits have various positive social behavior traits and have a more optimistic view of maintaining relationships. In other words, the wrong behavior of others may be the reason they have compassion. It is also observed that individuals with agreeableness traits are cooperative, soft-hearted, empathic, warm, and helpful and they have positive thoughts about others (Glass, Prichard, Lafortune and Schwab, 2013). Therefore, they believe that most people are reliable, reasonable, and honest, which may be a reason for their high tendency to forgive. There are people who are grateful for the people with agreeableness traits around them for the contribution of joy in their life. This situation improves the belief that forgiveness and gratitude are related (McCullough et al. 2002). Similarly, in another study, it was found that the agreeableness traits were positively correlated with forgiveness and gratitude (Ajmal, Amin and Bajwa, 2016). Ilbay and Sarçam (2015) reported positive predictions of forgiveness and gratitude and psychological fragility. In the case of the forgiveness of the individual in the choice of forgiveness and relationship, the
forgiven person can react with a sense of gratitude. Gratitude reduces the individual's negative feelings, increases positive feelings and strengthens the tendency to forgive (Witvliet, Ludwig, and Vander Laan, 2001; McCullough, Emmons, and Tsang, 2002). It is thought that the gratitude of the individuals who have a tendency to forgive is from the the agreeableness dimension. Individuals with feelings of gratitude are among those who tend to forgive (McCullough et al. 2002). Therefore, if people can increase their level of forgiveness, it seems possible to improve their feelings of gratitude. Agreeableness is also a feature that helps an individual effectively manage interpersonal frustrations and anger (McCullough et al. 2001). Revenge, which reduces the tendency to forgive, has been found to be negatively correlated with the agreeableness dimension. That is, people with the tendency to approve revenge attitudesor those who use revenge as a problem-solving strategy have a lower level olagreeableness (McCullough et al. 2001). In an experimental study, a positive correlation was found between the big five personality traits and the “forgiveness - no revenge” factor (Ashton, Paunonen, Helmes, &Jackson, 1998). Theagreeablenesstrait is also among the important determinants of long-lasting of hatred (Roberts, 1995; Neto, 2007). Ajmal, Amin and Bajwa (2016) found that the individuals who had low feelings of revenge were found to have highagreeablenesstraits. Revengeis negatively associated withthe agreeableness and life satisfaction, so individuals with a high tendency to get revenge have a high level of negative impacts and a lower level of life satisfaction and perhaps have difficulty in maintaining interpersonal relationships (McCullough et al. 2001). In addition, a positive correlationwas found between the agreeableness trait and subjective well-being(Doğan 2012). Therefore, the findings of the study are incongruent with the present study.

The structured psycho-education program focused on gaining tendency to forgive individuals was shown to be effective in reducing ‘neuroticism’ levels from big five personality traits. This implies that the level of neuroticism decreases as the tendency to forgive increases. This is because emotional instability and being more susceptible to negative feelings (Lounsbury and Gibson, 2009) mighthal the ability to cope with any negative or stressful conditions. Therefore, it can be thought that the forgivingtendency of neurotic individuals has decreased considerably. In experimental studies, neurotic personality trait was shown to prevent forgiveness (Ashton et al. 1998). In fact, this is not surprising because the hostile attitude, which is the most important symptom of neuroticism, is a major factor that hinders forgiveness (McCullough and Worthington, 1999). Neuropathic features include anxiety and emotional imbalance. Those with high neuroticism are considered anxious, aggressive individuals with emotional fluctuations. People with low neuroticism are tranquil-calm, emotionally balanced, have anger control, high self-esteem and positive feelings (Benet-Martinez and John, 1998; Costa and McCrae, 1995). According to Ajmal, Amin and Bajwa (2016), individuals with high neuroticism dimension score experience more depressive affect, anxiety, anger, and guilt. It is known that these negative emotions reduce the tendency to forgive. Thus, findings of an excessive amount of research support the finding of the current study. It was found that there was a negative correlation between neuroticism and forgivenessand a lower neuroticism score implies a higher tendency to forgive (McCullough et al. 2001a; c; McCullough, Bellah, Kilpatrick, and Johnson, 2001; McCullough and Hoyt, 2002; Brose, Rye, Lutz-Zois, and Ross, 2005; Berry, Worthington, Parrott, O’Connor, and Wade, 2001; Brown, 2003; Brown and Phillips, 2005; Neto and Mullet, 2004; Walker and Gorsuch, 2002). Similarly, Ajmal, Amin and Bajwa (2016) found a negative correlation between neuroticism and forgiveness. In another study, Hafnidar (2013) found a significant positive correlation between emotional balance and forgiveness despite neuroticism. However, Brown (2003) reported a positive correlation between forgiving others and neuroticism.

The hostility and anger elements of the dimension of neuroticism constitute a major obstacle to forgiveness (McCullough et al. 2001c). It can also be thought that irritation and rapid anger can prevent forgiveness. Because these features can cause the re-emergence of negative emotions when amisbehavior occurs which may prevent the development of positive emotions. Neuroticism is one of the important factors that affect the long duration of a negative emotion (Roberts, 1995; Neto, 2007). Because individuals with high neuroticism scores against emotional stability have a tendency to ruminate after an error (McCullough et al., 1998). Similarly, individuals with low feelings of revenge were found to have high neuroticism against emotional balance (Ajmal, Amin and Bajwa, 2016). Ashton, Paunonen, Helmes and Jackson, (1998) reported a positive correlation between the neuroticism dimension of the big five personality traits and “forgiveness - not taking revenge” factor in their experimental study. According to the findings of Doğan’s (2012) study on the relationship between personality traits and subjective well-being, a significant negative correlation was
found between neurotic personality trait and subjective well-being. Therefore, the findings of the previous research reported in the literature are incongruent with the findings of the present study.

The psycho-education program focusing on the tendency to forgive has been found to be effective in increasing the level of “self-forgiveness, forgiving others and forgiving the situation”. In order to support the psychological structure of forgiveness with experimental studies, a number of interventions were conducted (Freedman and Enright, 1996; Rye and Pargament, 2002). While most of the studies were related to forgiving others (Freedman and Enright, 1996; McCullough, Worthington and Rachal, 1997), the studies about self-forgiveness are rare (Al-Mabuk & Downs, 1996; Gerber, 1990). Self-forgiveness is the ability to accept personal mistakes (Ajmal, Amin and Bajwa, 2016).

There are studies that support the findings of the present study regarding the impact of psycho-education program applied to elevate forgiveness tendency on the big five personality traits evaluated. Walker and Gorsuch (2002) showed that extraversion dimension is an important predictor of self-forgiveness. In another study, the extraversion dimension was significantly associated with self-forgiveness (Ross et al., 2004; Mullet, Neto and Rivie`re, 1999). It has been reported that as the primary factor of extraversion dimension, the sense of friendship, is significantly related to self-forgiveness. In addition, self-confidence is significantly associated with self-forgiveness (Walker and Gorsuch, 2002). This is because individuals who score high on the extraversion dimension may have to make decisions for themselves and therefore do not need to forgive themselves. In addition, people with this personality can be reluctant to forgive and to be forgiven by others, as they are away from emotions and emotional comments. Ross et al. (2004) also found a positive correlation between the extraversion dimension and the characteristics of warm and positive emotions in self-forgiveness.

The strongest relationship with self-forgiveness is between anxiety and emotional balance, which are among the primary factors of neuroticism (Walker and Gorsuch, 2002). In the study of Ross et al. (2004), the neuroticism dimension was the only significant predictor of self-forgiveness. This result shows that those who have low emotional stability dimension also have difficulty in self-forgiveness. In addition, attributes such as depression, anxiety and fragility are the biggest indicators of self-forgiveness. Persons with these qualifications are described as having a personality trait that is emotionally fragile and prone to be guilty. In these individuals, the low level of depression is the best predictor of self-forgiveness, and the impulsivity is also low (Ross et al., 2004). Also, a significant relationship was found between emotional balance and self-forgiveness, and individuals with high emotional stability scores were reported to have low self-forgiveness after intense disagreements (Walker and Gorsuch, 2002). This may be because these individuals are extremely self-confident and therefore never need to forgive themselves. Alternatively, because they have a problem of forgiveness, they avoid great reactions, so they become more resilient to disappointment. Therefore, it is likely that individuals who score high on this factor do not need to constantly forgive themselves.

Self-forgiveness has also been found to be negatively correlated with the responsibility and the hostility factors of the neuroticism dimension (Ross et al. 2004). In another study, a significant correlation was found between the extent of responsibility and self-forgiveness (Mullet, Neto and Rivie`re, 1999). However, in still another study, no associations with self-forgiveness and responsibility knowledge was reported (Walker and Gorsuch, 2002). This may be because self-forgiveness is not regarded as an essential practice by many.

Shepherd and Belicki (2008) indicated that the self-forgiveness is prevented during worry-stress situations and is promoted in enthusiasm-morale cases. Agreeableness was found to be positively correlated with self-forgiveness (Ashton, Paunonen, Helmes and Jackson 1998; Mullet, Neto and Rivie`re, 1999).

Maltby et al. (2001) and Mauger et al. (1992) demonstrated a positive correlation between self-unforgiving/punishment (the punishment or accusation of self) and depression. Individuals who have difficulty in forgiving themselves tend to regard themselves as negative, and to experience feelings of guilt and worthlessness about depression. This attitude can lead to a sense of helplessness when confronting one’s own wrongful actions and hinder the process of self-forgiveness indefinitely. The findings of NEO-PI-R and self-forgiveness suggest that those who have difficulty in self-forgiveness experience more negative affectivity. It seems that those who do not forgive themselves have a tendency to internalize themselves, instead of externalizing and develop sense of self-harm (Ross et al., 2004). There is a positive correlation between agreeableness and the self-forgiveness (Leach and Lark, 2004), friendliness, assertiveness (Walker
and Gorsuch, 2002), the need for compassion, spirituality (Edwards, Lapp-Rincker, Magyar-Moe, Rehfeldt and Ryder, 2002); and a negative correlation between neuroticism (Leach and Lark, 2004) and distrust, anxiety (Walker and Gorsuch, 2002), anger, hostility, depression (Seybold et al. 2001), and psychotism (Johnson and Butzen, 2008).

Forgiving others is to stop taking revenge on the person who made the mistake (Ajmal, Amin and Bajwa, 2016). The findings of the earlier studies support the results of the present research. Walker and Gorsuch (2002) also found that individuals with high neurotoxicity scores against emotional equilibrium had a substantial difficulty in forgiving others, forgiving themselves and accepting the forgiving requests from others. Individuals who have had more resentment against others have higher scores in the neuroticism dimension and lower scores in the agreeableness dimension (Hafnidar, 2013). Ross et al. (2004) reported that although there were no significant determinants for forgiveness, only one significant correlation was found in the dimension of hostility in neuroticism, as predicted. Maltby et al. (2001) and Mauger et al. (1992) suggest that those who have difficulty in forgiving others are in a more punitive manner because the desire to take revenge, grudge, and anger experience are indications of this personality trait.

People with high agreeableness scores are trustworthy and sympathetic, and there is a positive correlation between agreeableness and forgiveness/given by others (Walker and Gorsuch, 2002). Agreeableness is an important predictor of asking for forgiveness from others. Walker and Gorsuch (2002), on the other hand, conclude that agreeableness does not have an effect on the forgiving others. There is a strong relationship between interpersonal relations (altruism, compassion), the relationship within oneself (trust, patience) and the nature of forgiving others and the extent of forgiveness and agreeableness (Brose et al. 2005). Agreeableness dimension was positively correlated with forgiving others (Ashton et al. 1998; Mullet, Neto and Rivie`re, 1999). The positive correlation between the agreeableness dimension and the forgiving others emphasizes interpersonal (altruism, voluntarism) as well as self-directed (trust, patience) nature (Ross et al. 2004). The reason for this is that the individuals with these characteristics are more likely to forgive others and think that those who make mistakes against them are not malicious and do not deceivingly make this mistake.

Extraversion dimension was found not to be effective on forgiving others or self-forgiveness (Walker and Gorsuch, 2002). The dimensions of extraversion and conscientiousness were found to be significantly related to forgiving others (Ross et al. 2004; Mullet, Neto and Rivie`re, 1999). It has been found that there is a positive correlation between forgiving others and extraversion dimension, warm and positive emotions characteristics (Ross et al. 2004). There was a positive correlation between forgiving others and extraversion, sincerity, positive emotions (Shoemaker and Bolt, 1977). It has been reported that there is often a positive correlation between forgiveness and conscientiousness (Mullet et al., 1999)

Ajmal, Amin and Bajwa (2016) demonstrated a positive correlation between forgiving others and conscientiousness. However, many studies reported no relationship between forgiving others and conscientiousness (Ashton et al. 1998; Ross et al. 2004; Walker and Gorsuch, 2002). People who have difficulty in forgiving others, who do not feel sad because of a violation/mistake, and who are inclined to self-forgiveness are “more self-centered, narcissist, insensitive, morally weak, less embarrassed, unable to show remorse and empathy” (Tangney et al. 2015). Walker and Gorsuch (2002) indicated a negative correlation between forgiving others and the openness dimension.

Sançam and Biger (2015) emphasized that compassion is significantly related to forgiving others. Neff and Pommier (2013) stated that forgiving others requires an understanding of the broader causes and conditions. Forgiveness is a way of getting out of pain. When we forgive others, we eliminate the anger and pain. In other words, it can be thought that compassion to self is a necessary factor for forgiving others.

It has been observed that structured psycho-education program which focuses on improving forgiveness tendency is effective in increasing the level of “forgiving the situation”. Individuals who are susceptible to physical pain can be particularly vulnerable to physical problems and therefore may be less likely to forgive. Individuals who need more emotional support may often not be able to forgive and cope with the problems themselves, as individuals who are self-confident do. In addition, in the study of Shepherd and Belicki (2008), it was noted that forgiveness was consistent, but most participants expressed that their forgiveness depends on the situation. Although personality traits of people have tendency to forgive in general, there are many
situational factors (the magnitude of the perceived mistake, whether the effects are persistent, the time elapsed after the failure, and the proximity of the relationship) that ultimately determine whether people should forgive a mistake. Wang’s (2008) study also found that the agreeableness dimension was significantly associated with situational forgiveness and permanent forgiveness. In addition, neuroticism was found to be negatively correlated with situational forgiveness and continuous forgiveness. There was no significant correlation between the other three personality factors (openness, conscientiousness, extraversion) and two forgiveness points (situational forgiveness and persistent forgiveness). In a study by Azar et al. (1999), 48 participants were asked different and hypothetical mistake/violation cases in the framework of educational status, age, gender and religious group. It was observed that the lack of deliberate malpractice and the lack of lasting negative results positively affect the attitude towards forgiveness. Intentionality of the violation/mistake was and the persistence of the outcome were more effective especially in the participants with lower level of education. In a study conducted by Zechmeister and Romero (2002), the participants were asked for an exposed violations/mistake experience and their violation/mistake experiences. After all, it was observed that the participants did not forgive the serious mistakes/violations they perceived. The possible reason for this is that it is difficult to forgive the mistakes/violations that result in severe consequences, or that the individual perceives the consequences of the wrongdoing as weak after a while.

It has been observed that the structured psycho-education program that focuses on elevating the tendency to forgive is effective in increasing the general level of forgiveness of participants. To explain this hypothesis, it can be argued that forgiveness is one of the priceless features of mankind and an absolute necessity for the continuity of human existence. It is a feature that converts a person from a collapse state to an integration state (Worthington, 2005) and is an opportunity to regain confidence and reconfiguration. Therefore, it is a factor to reconnect to a trust-based relationship again (McCullough et al. 2001). Forgiveness can be formulated as a positive social behavior change against a mistake (McCullough et al. 1997; 1998). These motivational changes have an important place in basic personality processes (McCullough and Hoyt, 2002).

Forgiveness is an internal process which is an indicator of positive self-esteem. One practices different experiences while forgiving others, asking forgiveness from others and from God, and self-forgiveness. Through each of these dimensions, it provides a love, cognition and behavior change that leads to educating people after making fictitious or real mistakes (Brown and Philips, 2005).

Forgiveness, which is one of the important processes of psychology, leads the communication, emotion, spiritual and physical development of human beings and can also support mental health positively by affecting interpersonal function and healthy behaviors. According to Tusanit and Webb (2005), forgiveness reduces the level of anxiety, anger and depression of the forgiving person, which implies that forgiveness can result in the relief of the pain and suffering experienced in life. Forgiveness is a real determination and change in the emotional experience of people, which is related to physical and mental health (Worthington, 1998).

Most of the experimental studies regarding forgiveness are practical and feasible (Coyle and Enright, 1997; Freedman and Enright, 1996; Hebl and Enright, 1993; McCullough and Worthington, 1995). Ghobari Bonab, Keyvanzadeh and Vahdat Torbati (2008) found a correlation between the level of forgiving and mental health of the students, and it was revealed that the students with more forgiving tendencies experienced less depression, anxiety and interpersonal problems than the other group. Similar results were found in the studies conducted by McCullough et al. (2001a). Köç et al. (2016) found that the level of psychological well-being increased as the tendency to forgive increase. In addition, as the tendency to forgive increased, the level of intolerance to ambiguity decreased with no mediating effect on psychological well-being. The increase in the tendency to forgive also increases the level of anger management and it was reported that the tendency to forgive is mediated by the effect on psychological well-being.

On the other hand, Watkins and Regmi (2004) reported no correlation between forgiveness and personality traits in the study conducted in Nepal. Fu et al. (2004) concluded that, in collectivist societies, measurement tools for personality traits developed in western cultures about social adaptive factors such as relationship harmony are more effective in forgiveness. Bugay and Demir (2012) used “Forgiveness Development Group” based on Enright’s (1996) Forgiveness Process Model for the purpose of testing the effectiveness of the psycho-education program established to improve university students’ self-forgiveness and forgiving others.
No procedure was performed to the control group between measurements. According to the findings of the study, there was a significant difference between the results of self-forgiveness of the experimental and control groups where the experimental group performed higher forgiveness scores.

Thus, it was observed that the prepared psycho-education program was effective in increasing the forgiveness (self-forgiveness, forgiving others, and forgiving the situation). It is concluded that students' general forgiveness level increased positively. In addition, it is evident that the levels of participants of five-factor personality traits of extraversion, agreeableness, openness to experience, and conscientiousness increased, and that of neuroticism decreased.

This study was limited to 10 sessions of psycho-education program practice with the individuals having low tendency to forgive and high neuroticism scores. In the present study the effect of a psycho-education program aiming to elevate the tendency to forgiveness and the five-factor personality traits were examined. Comparing the results of this study with the outcome of an expanded psycho-education program enriched with different variables would be invaluable. In addition, educational institutions, counseling centers, and social development centers can benefit from this psycho-education program in group guidance studies.

References


Enhancing Students’ Learning Motivation by Applying Reflective Pedagogy to Modules for Junior High School

Tri Agnes¹, Asrowi², Leo Agung Sutimin³

¹²³Department of Educational Technology, Universitas Sebelas Maret, Indonesia

ABSTRACT

The Reflective Pedagogy Paradigm is an art of thinking and doing something thoughtfully that incorporates humanistic values into conscious subjects consciously. This paradigm endorses the meaning of each topic within learning materials based on the students’ own experience. Students take into their consciousness life values with learning materials by themselves or by their groups in order that they can practice it in daily life. This study is aimed to develop an eligible module using reflective pedagogy and revealing the impact of the use of module on students’ motivation to study and experience. In this study, the developmental research method was used for resolving learning problems within eight grade of Junior High School Students during the Catholic religion class. ADDIE (analysis, design, development, implementation, and evaluation) model was used as the module development method in this study. This study used the non-test method as the data collection technique with questionnaire and interview as the instruments. The data analysis techniques used in this research were descriptive quantitative methods. The results of this research show that the use of the module in eight graders Junior High Schools categorized as eligible based on media and material experts. Thus, it can be concluded that the module is suitable for use. The improvement appeared after the implementation conducted using the reflective pedagogy module. The result shows that students’ motivation is significantly higher than before using the module according to t-test calculation. The result of post-test and pre-test score is statistically different so that means that the implementation of the reflective pedagogy in religion subject improves learning motivation

Keywords: teaching material, reflective pedagogy, learning motivation, module

1. Introduction

In general, education is a communication process which includes the transformation of knowledge, values, and skills through complex institutions. The important roles of education are creating human resources with specific qualifications based on the era in order to survive. In the 21st century, there is development on the qualification that should be owned by human resources which shifted from simple cognitive skills to be more complex (Jerald, 2009). The complex cognitive skill is a challenge because it is only can be reached by complex and meaningful learning. The fashioned model of teaching will be difficult to follow those needs. Conventional learning processes which are often carried out by teachers at the junior high school levels should be abandoned since lack of the reciprocal communication process between teachers and students. Teachers pay less attention to the context and background of each student, even though they have their own experience, context, background. Emphasizing on the cognitive side is more dominant in the learning process. Students often do not recognize the benefits of any teaching material in their everyday life. Students
learn only to get a score, not to understand (non scholae sed vitae discimus). Those facts make the teacher lacks integrating human values in each teaching material during the learning process. The ideal learning process should integrate human values in any teaching materials so that students are not only developing the competence, but also the treated side of the conscience and compassion. This is emphasized in the learning strategy of the reflective pedagogical paradigm (Duminuco, 2000)

Learning is an effort exerted deliberately by educators to convey science, as well as to organize and create environmental systems with various methods so that learners can perform learning activities effectively and efficiently with optimal results. Learning is the process of interaction among learners, between learners and educators, and learning resources to a learning environment. Learning by using the reflective pedagogy paradigm is one of strategy which can be a solution to overcome the problem of the learning process in the classroom. The teacher is expected to pay more attention to the background and characteristics of each student in the learning process (Dick, Carey & Carey, 2009). Student characteristics of are known conditions that are owned by the target audience or target group when students follow learning. The paradigm of reflective pedagogy gives humanity values in every teaching material (Connor, 2014). Thus, students as individuals can develop as a whole and integral in competence, conscience, and compassion. The role of the teacher is only as a facilitator, in every learning process in the classroom (Witfelt, 2000).

A learning strategy is one of the factors that need to be considered by teachers or educators in their learning process. It consists of: (1) learning organizing strategy, (2) learning delivery strategy, and (3) learning management strategy (Uno, 2013). The example of the second strategy, the learning delivery strategy, concerns the use of eligible teaching materials during the learning process (Proulx, 2006). After determining the appropriate strategy, selecting material is also an important part. Teaching materials are important for the implementation of education in schools. Through selective teaching materials, teachers will find it easier to implement the learning process, and students will be more helpful and find it easy to study. Teaching materials can be created in various forms based on their needs and characteristics to be presented. Hadar explores how textbooks function in education. It asked whether opportunities provided in textbooks to engage in tasks demanding different levels of understanding correlate with students’ achievements for tasks demanding equivalent levels of understanding on a standardized exam (Hadar, 2017).

In fact, most teachers have been using instant conventional teaching materials, and they do not even do any effort to plan, prepare, and arrange the teaching materials by themselves. An interesting, effective, and fun learning process cannot be created by only using the instant learning materials. On the contrary, a teacher is required to be creative in arranging innovative, varied, interesting, and eligible teaching materials that suit students’ needs to create an interesting and fun learning process. The use of teaching materials sources in junior high schools is still limited to the instant teaching materials prepared by the government and students’ activity sheets prepared by teachers. The book was given by government sometimes seems less interesting to be used as teaching material for students because of its less attractive appearance; sentences are too long, and the students feel that the book’s size is less practical. These points make them less interested in reading and then doing several activities of learning. In addition, they do not have other reference books that can help them to learn independently.

Based on the above explanation, an innovative, creative, supportive and attractive teaching material needs to be developed. One alternative is to develop a supporting material in the form of a module combining the step of reflective pedagogy in the activities of learning. Ease of understanding the material will bring about the motivation to succeed.

1.1. Learning Motivation

Motivation and learning are two things that influence each other. Learning is a change in a person’s behavior is relatively permanent and potentially occurs as a result of reinforced practice, which is based on achieving a certain goal. Learning motivation can arise in a person because of intrinsic and extrinsic factors. Intrinsic factors, for example, desires and desires to succeed and encouragement of learning needs, hopes for ideals (Rockinson-Szapkiw, Holder & Dunn, 2011). Whereas the extrinsic factor is the existence of encouragement from outside of someone’s personal self who learns, for example, the existence of awards, praise, a conducive learning environment, and interesting learning activities, and fun. Both intrinsic and extrinsic
factors are caused by certain stimuli so that someone has the desire to do more active and uplifting learning activities. Motivation is a change in energy in the human person which is characterized by the appearance of feelings and reactions to achieve a goal (Hamalik, 2003).

The nature of motivation to learn is internal and external motivation for each student to make behavioral changes. Motivation to learn is promoted when a learners’ curiosity is aroused due to a perceived gap in current knowledge (Keller, 2008). This motivation will have a big role in the success of each student in learning. The indicators of learning motivation can be classified as follows: (1) the desire and desire of someone to succeed; (2) there is encouragement and need for learning; (3) future hopes and ideals; (4) appreciation in the learning process; (5) the existence of interesting and enjoyable learning activities; (6) the existence of a conducive learning environment, allowing students to learn comfortably and well (Sardiman, 2005). Learning requires motivation since it is an essential condition of learning. Learning outcomes will be optimal if there is motivation in each student. The more appropriate the teacher gives motivation to each student; the students will be more successful in the learning process and get optimal learning outcomes. Students who have high motivation in learning, the learning outcomes will be better, when compared with students who have less learning motivation (Wang & Guthrie, 2004).

Students; motivation can reach a high level during the learning process. Therefore, a teacher should pay attention to the following things: (1) optimize the application of the principle of learning, namely that the presence of students in the classroom is a learning motivation that comes from students; (2) optimizing dynamic elements in learning. In the learning process, students may have obstacles in learning because they have problems. Educational psychologists said that the mental strength that drives learning is a motivation to learn. Motivation is seen as a mental impulse that moves and directs human behavior, including learning behavior. In motivation contained the direction of attitudes and individual learning behavior. Motivation basically functions as a driver of business and achievement. The existence of good motivation in learning will show good learning outcomes. In other words, that with diligent efforts and especially based on high motivation, someone who learns will be able to achieve better learning achievement.

1.2. The Reflective Pedagogy Paradigm

The main source of reflective pedagogy is Ignatius Loyola. That is why it also called as Ignatian Pedagogy. He founded the Religious Order of the Society of Jesus in 1540. This group of religious priests was not first established to start schools. But in the development, and for the needs and interests of society at that time, Ignatius had to make a big decision to choose the apostolate of education as one of the effective means for the development of people who excel in faith and character. Changes in society will become increasingly humane depending on how young people are educated as the principio of Puerilis institution est renovation mundi (education for young people is a way to change the world).

The success of the schools which had been established by the Jesuit priests became a wonder and question for many people at that time. Schools that were founded by Jesuit priests were so numerous and spread so quickly and were in demand by various countries in Europe. What is taught in the school, what are the activities and how to educate those young people? A set of teaching plans for the school priests is the key to their success. The supreme leader of the Jesus union order, Claudius Aqua viva, formed a work team in 1581, whose task was to collect the best practices from schools belonging to the Jesuit order. Then the team formulated a teaching plan that was widely known in the world of medieval European education with the name of Studiorum Ratio, which was abbreviated from the ratio of at que institute studiorum societatis jesu (teaching plan for Jesuit education institutions). The team completed the draft of studiorum ratio in 1586 and was used ad experimentum, to be evaluated later. Since then more than 1,000 schools managed by the priests of the Jesus union order in various places have always referred to the studiorum ratio to develop school education activities. In order to celebrate the 400 year age Ratio Studiorum, the highest leader of the Jesus union order, Peter-Hans Kolvenbach SJ, formed a team to reformulate the studiorum ratio, to fit the context of the era. The result was the publication of the book “The Characteristics of Jesuit Education” in 1986 (Kolvenbach, 2014).

Reflective pedagogy is a call to human excellence and the fullest possible development of the whole person: intellect, feelings, head, and heart. It seeks to uncover and explore relationships, insights, conclusions,
problems, solutions, and implications in the life long quest to understand what it means to be human (Font-Guzmán, 2014). The tradition is not limited to certain areas of education; rather it is ubiquitous, comprehensive, and can be applied to any discipline. Jesuits issued the Ratio Studiorum in 1599, providing a statement of principles and objectives for the Jesuit colleges around the world. The reason for the Ratio Studiorum is relevant to this day is due to the fact that its lessons were meant to endure and evolve as education and learning evolved; it was created to be a living document. The methodology is flexible and evolves over time to stay current and relevant. Jesuit pedagogy incorporates techniques from a variety of sources in order to contribute to the intellectual, social, and moral formation of the whole person.

In 1993, in Rome, the center of the government order of the union of Jesus, there was a team assigned to disseminate the characteristic of Jesuit education. This team gathered a number of education experts from Jesuit schools throughout the world. They gathered and shared experiences on key methods in the implementation of modern education that was in accordance with The Characteristics of Jesuit Education. They are well aware that the basic spirit that forms the foundation of Jesuit education is the spiritual practice taught by Ignatius Loyola, founder of the Society of Jesus. They felt that Ignatius had inherited a pedagogical method which led to and developed from Ignatian spirituality.

The main dynamic of reflective pedagogy is the continuous interaction of three main elements, namely experience, reflection, and action, in the learning process (Hayes, 2006). The three elements are complemented by other complementary elements, namely the context in which the experience takes place and evaluation after an action is taken. A very central element in reflective pedagogy is a reflection. This reflection is interpreted as listening attentively back to study material or certain teaching materials, experiences, ideas, proposals, or spontaneous reactions in order to capture the deeper meaning. Or in other words that reflection is an attempt to bring up the deepest meaning of each teaching material in human experience. The paradigm of reflective pedagogy has been widely used in various schools. The paradigm of Ignatian pedagogy is often also referred to as the paradigm of reflective pedagogy to show that the important point is a reflection (Jármai & Bérces, 2012).

![Cycle of reflective pedagogy elements](image)

**Fig. 1.** Cycle of reflective pedagogy elements

1.2.1. **Context**

In this context stage, the teacher facilitates each student to examine the various contexts in his life. The main goal is so that each student can more accurately detect various kinds of possibilities that exist and that have the potential to support or hinder students in the learning process. The mindset of each teacher in starting the learning process with reflective pedagogy learning strategies must be more self-centered in each student (Henson, 2003). The teacher must understand as much as possible the various kinds of contexts that cover each student as subjects who will be motivated, and supported to achieve complete personal development.

Educators need to understand the world of students as a whole. The real-life context of students concerns the ways of life in the family, customs, habits, peers, culture, social society, politics, economics, religion,
media, art, school environment and other things that will influence the world of good students or bad (Subagyia, 2012)

So, in essence, the context in reflective pedagogy is all the factors that support or hinder each student in following the learning process. From the teacher’s point of view, this means that the context is: (1) personal recognition and concern for each student by the teacher and (2) a conducive environment for the learning process and growth in each student to interpret the values contained in the learning process. From the perspective of students, the context is more related to the willingness and readiness of each student to be able to learn and develop in order to achieve increased quality results (International Commision of the Apostole of Jesuit Educatio [ICAJE], 1993).

1.2.2. Experience

According to Ignatius, experience means "to have something in the mind" (Subagyia, 2012). Experience presupposes the existence of facts, understandings, and concrete principles experienced by someone. From that experience, someone is invited to observe, recognize and interpret every fact, understanding or principle and what it means to the deepest in his life so that makes the experience to become a key element in education (ICAJE, 1993).

In a Jesuit school, learning experiences are expected to move students and students to surpass not only rote knowledge but become increasingly complex learning skills, understanding, application, analysis, synthesis, and evaluation (Loving, 2011). We use the term experience to describe each student and student activities where in addition to a cognitive understanding of the material being studied, students and students are expected to also capture the sensitivity of feeling. The term experience according to Ignatius is used to show each student’s active activities that contain cognitive elements in the teaching material being studied. Every experience has data and facts that are cognitively absorbed by each student. This is done through the activities of asking, investigating, and analyzing various types of elements and their interrelationship with data from one another.

There are two kinds of experiences, namely direct experience, and indirect experience. Direct experience is the experience experienced by each student directly. That experience is usually experienced through interpersonal experience, group discussions, or research in the laboratory. Whereas indirect experiences occur in the learning atmosphere that students acquire through reading articles, news, listening to audio and viewing electronic media visually.

At this stage, students are guided to seek new understanding by comparing, contrasting, evaluating, analyzing, and synthesizing all mental and psychomotor activities to better understand reality. Examples of student activities that can be carried out at this stage include group discussions, research in the field or laboratory, the use of electronic media, visual films or animations, simulations, paper making and presentation, problem-solving (Collins, 2008). Active participation of each student through various activities will provide optimal meaning and influence on student learning experiences.

1.2.3. Reflection

Reflection according to Ignatius is used in the sense of looking back at certain study materials, experiences, ideas, proposals or spontaneous reactions. This is done so that each student can grasp the deeper meaning of the learning material he is learning. So reflection is a process that raises meaning in every human experience (Loving, 2011). Reflection means taking careful consideration by using memory, understanding, imagination, and feelings concerning the field of science, experience, ideas, desired goals or spontaneous reactions to capture the meaning and intrinsic value of what is learned. Through reflection activities, the experience gained by each student is expected to be more meaningful so that it can stimulate each student to take real action. At this stage of reflection, it will increase the depth of understanding that is formed and become a meaningful learning process (ICAJE, 1993). Reflections on Ignatian pedagogy are at the heart of the cyclical process of learning.

Reflection on reflective pedagogy becomes raw and meaningless if it only stops producing students’ understanding and affective reactions. Reflections that begin with the reality of real experiences must end and lead to concrete reality to produce new experiences. Reflection can develop in every student if it leads to
real decisions and determination. Experience and reflection cannot be separated from each other. It is not possible for students to gain experience without reflection even if only a little. But on the other hand, all reflections presuppose an experience, intellectual, or affective regarding understanding, enlightenment, worldview, and views about oneself or others (Subagya, 2012).

1.2.4. Action

The action referred to in reflective pedagogy is that students interpret learning outcomes with mind and heart to realize their knowledge in real life practice (Hilton & Plummer, 2013). Actions that can be applied in ignorant pedagogies include project-based learning, problem-and based learning. Students who process their experiences in the reflection stage will form attitudes and values in students. The meaning of experience gained by students through reflection is intended so that students are able to make decisions and act significantly in everyday life. The knowledge that has been obtained by students during the learning process does not stop at the theoretical level but is directed and manifested in the real life of students in concrete environments.

1.2.5. Evaluation.

Evaluation in the process of reflective pedagogy learning is not only done on academic aspects but also on humanitarian aspects. Evaluations are conducted periodically to encourage teachers and students to pay attention to intellectual development, attitudes, and actions that are in line with the principles of men and women for and with others. Mastery of knowledge and skills is evaluated, among others, with written tests or tests, portfolios, projects, etc. Meanwhile, the development of personal attitudes is evaluated by personal interviews, examining student reflective journals/books, measuring student interpersonal relationships, observing students' activeness in the classroom, and others.

1.3. Review of Previous Related Study

Learning based on reflective pedagogy paradigm which is described by the framework of thinking Joyce and Weil (Joyce, Weil, & Calhoun, 2017) has the following elements: (1) Syntax or sequence of learning: steps starting from the phase: context, experience, reflection, action and evaluation; (2) Reaction Principles: the teacher must know and understand in detail every context of student life, the teacher acts as a facilitator in the learning process, the teacher in the learning process is student-centered; (3) Social system: the teacher knows, understands, and accepts the uniqueness of each individual student, the teacher guides, directs and learns with the students, the teacher creates a shared learning atmosphere between the teacher and students, and students with students, the teacher guides and direct students so students can get to know each other, be open and listen to experiences or ideas from peers; (4) Support system: syllabus and plan of learning implementation, teaching aids in accordance with the material taught, laboratory or laboratory space outdoors (surrounding nature), library space, reflection books or each student's personal journal, reflection books or teacher journal; (5) Instructional effects: where students feel the learning experience with peers, students can be more active, creative and innovative to absorb the materials, students independently found their knowledge and solve their learning problem by their selves or with their friends, the learning outcomes increase within the materials learned (6) Nurturant effects: students can work together with their peers, students learn to communicate and express their idea and thought, students can respect and understand each other, students learn to help and finally foster solidarity.

The reflective pedagogy has some strengths such as can make (1) students having a real experience, and actively participate in the learning process, (2) students having an ability to do reflection to their experience during the learning process and finding the meaning of each learning, (3) students can learn to take a decision on their reflection result to do a concrete action in daily life; (4) teachers having an optimum chance to be a facilitator and motivator during their students independent learning; (5) teacher having a better psychological relationship to the students and deeply understanding every single context of them.

The use of reflective pedagogy was proven by several researchers to increase students’ motivation. For example, a study conducted by Hartana, Setyosari, Kuswandhi (2016) resulted an improvement of elementary students in learning science. By using Tuckman and Happer (2012) model of classroom action research, they can implement the reflective pedagogy to solve the motivational problem of students in two cycles of
treatment (Hartana, Setyosari & Kuswandi, 2016). The reflective pedagogy appeared from the nature of theology or religion education and the chosen paradigm is supposed to be better applied in religion context even though has a wide use (Ihssen, 2011). The combination of pedagogy and book or module was notified to be a solution. Some students report simply preferring a text based book (Jamali, Nicholas & Rowlands, 2010). Clearly, many researchers have been primarily focused on empirical research on the effectiveness as a learning tool (Woody, Daniel & Baker, 2010).

2. Methodology

2.1. Type of Study

This is a developmental study to create a module in a religion teaching using reflective pedagogy. The development model used in this study was ADDIE proposed by Molenda (Molenda, 2003). It consists of five stages: (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation. The aim of this research was to evaluate the product developed in terms of enhancing students’ motivation. To reach the conclusion of effectiveness in promoting students’ motivation, the researcher will precedes the qualitative study to describe the importance of development (in Analysis part), the combination of reflective pedagogy in module created (in design part), the expert judgment on module quality (in Development) then directly through the effectiveness assessment (in Implementation and Evaluation parts). The research was sequentially and done during October to december 2018.

2.2. Participants

The subjects in this study were 120 students of eighth grade at Junior High Schools in Indonesia. All of the participants were range from 12-14 years old students and consisted of 60 male and 60 female. The obtained data in this study were quantitative data as the primary data and qualitative data in the form of respondents’ suggestions. The data provided an overview of the quality of the developed module. 1) The data from media experts were in the form of product quality seen from the aspect of visual media display. 2) The data from material experts were in the form of product quality seen from material aspects and teaching design. 3) The data from the respondents i.e. the eight grade students were in the form of assessment of the product quality seen from the aspects of visual media display, material, and teaching design.

2.3. Data Collection Technique

The data collection techniques used in this study were questionnaires and interviews. The data were analyzed using a descriptive quantitative statistic. The data collection instrument used was that of a questionnaire. The questionnaire from the media and material expert was analyzed by using a descriptive quantitative method. The percentage was obtained based on the calculation of scores on the Likert Scale. Thus the result of motivation is analyzed using a t-test to find the statistically different before and after the use of the module. The interview is used in the analysis part to gain basic problem faced by teachers and students related to teaching materials. Ustructured interview was taken to draw the characteristics of teaching materials and the difficulties faced on its application. The data from interview section is tabulated by the collecting based on their pattern and relation towards certain topics. The interview is also used in evaluation part to gain information about the teachers’ opinion and satisfaction on the product developed.

2.4. Instruments

Since motivation cannot be directly observed, self-reports are most commonly used to measure motivation. Numerous motivation instruments have been developed and validated (Schunk, Pintrich & Meese, 2007). An instrument derived from the ARCS Model of Motivational Design and that has been widely used and validated is Instructional Materials Motivational Survey (IMMS) (Keller, 1999). Thus, the IMMS will be useful to examine learned motivation in this study.

3. Findings And Discussions

The development process used in this study consists of 5 stages i.e. analysis, design, development, implementation, and evaluation.
3.1. Analysis

The analysis stage comprises the analysis of teaching materials and media needs. Teaching materials used in eighth grade are in the form of students’ activity. It only contains summaries of materials with an illustrated look of a colorless picture. The weakness is that the content is not explained in detail, for instance, the lack of activities which encourage the student to be motivated. The needs analysis is conducted by examining the students’ characteristics from the results of interviews with religion teachers who have known their characteristics well. The results of the analysis are observed by taking samples in 6 teachers from 2 schools. The general characteristic of eight graders at junior high schools is that the students are 12 to 14 years old. According to Piaget, at the age of 11 years and above (the formal stage of operation) children have grown up, in the sense that they have the ability to coordinate simultaneously realized by the sequential use of their cognitive ability, namely using the hypothesis and principles of learning independently.

Table 1. Problem faced by students related to teaching materials

<table>
<thead>
<tr>
<th>Theme</th>
<th>Good</th>
<th>Enough</th>
<th>Less</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teaching materials contain a summary</td>
<td>15</td>
<td>45</td>
<td>60</td>
</tr>
<tr>
<td>The teaching materials contain challenging exercises</td>
<td>25</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>The teaching materials is practical</td>
<td>35</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>The teaching materials motivate you to learn more</td>
<td>20</td>
<td>30</td>
<td>70</td>
</tr>
</tbody>
</table>

The problems expressed by the students based on the results of interviews on teaching materials is that they use worksheet which contains a less detailed summary of material, less interesting exercises because of its common appearance i.e. fill in the blanks and the use of opaque paper. In addition, the worksheet size tends to be large, and they thus find it difficult to carry it anywhere. They want a more practical and easier book to use when studying wherever and whenever, and they also want a more complete material book that can make them easier to understand. One of the criteria of good learning resources is the learning resource that can motivate students to study the subjects by providing interesting images, as well as cleaner and more colorful paper, allowing teachers to stimulate the learners to study in the learning program.

3.2. Design

This stage is to design a module that has been formulated and in accordance with the learning objectives to achieve. The purpose of the design stage is to design the product based on the analysis results. However, before designing the product there are things to be done including collecting necessary materials such as drawings, tables, and references, developing tests and evaluations, and drafting an initial product. There are several pedagogical additions made to the module related to the topic of “respecting others”.

The first amendment made to the module was to assign a one-page response paper. The paper asked the learners to collect article about racism, discrimination or a related topic in a different place (preferably based on their place of origin). After their selection, they were asked to discuss the factor the cases appear and the solution. The learners had the option to choose articles from any newspapers. The assignment was to write a reaction to the article, discussing the value and attitude should be possessed to prevent those cases. After returning the papers, our lecture time was devoted to evaluation, reflection, and discussion. The teacher asked to search the similar case in their neighborhood and retell to their friends the next day. The learners were asked to retelling the case and moral value they found based on the articles then the student will search for questions to steer their discussion. The probing questions asked by the teacher, as well as other learners as the discussion progressed, assisted the group to come to a deeper understanding of the articles and the use of each attitude.

The reflective education applied tries to instill in students an ability to understand reality and to evaluate it critically. The teachers involved a lively discussion regarding one of the collected article and ask another student to comment on. The comments should be written in the blank page of the module as peer comments.
The classroom discussions persuaded the students to consider other people’s point of view, realize that personal experience plays a large part in the formation of individual perception, as well as develop an interest in further research and foundations.

The intention of the response paper was to engage the student’s experience, reflection and action to occur. Experience is the manner in which teachers create conditions whereby students can gather and recollect the material given their own experiences. The best way to engage students as whole persons in the learning process is for the teacher to serve as a guide and to create conditions by which learners may draw on their own experiences in order to refine what they already understand about the subject matter at hand. Combining this cyclical method of referring to prior feelings, thoughts, and experiences, and the course material is how students are able to process the knowledge gleaned and form it into truth. The articles assigned enhanced the students’ experience by introducing human interest factors, a self-study activity, cooperative learning, and small group exercises.

The second aspect of the exercise explored was a reflection. The peer evaluation in the module can be a personal reflection. However, the main reflective methods that the assignment elicited were contemplating case studies and participating in spontaneous debates. The purpose of reflective exercises is to more deeply understand and internalize what one has learned. The article dialogue allowed the students to further understand the meaning and significance of value and attitude what they are studying and how the attitude relates to different aspects of their lives.

The solution proposed in the cases in the exercise was the concept of action. The process involves two steps: pondering truth and then taking necessary action (Freeman, 2012). Teachers provide the opportunities to challenge students and test the imagination that will allow the students to choose the best course of action given what they have learned. Students found themselves doing additional research to familiarize themselves with the issues in their particular article. The teacher’s gentle questioning may point to the need for more adequate decisions or commitments, what Ignatius Loyola called the magis.” The magis, or the more, means to go above and beyond what you currently know, understand and believe and achieve more in the pursuit of truth.

3.3. Development

At the development stage, the product is made based on the design, being validated and developed based on validators’ suggestions. After the product is made, the product eligibility assessment is conducted by two evaluators, before being implemented in high schools. The module is reviewed by the media experts first. The reviewers fill out a review sheet where the contents of the questionnaire are in the form of suggestions and input from media experts in order to find out about the downsides of the module as teaching material. It is revised based on suggestions/feedback from the media experts who produce the revised module which subsequently is validated by the media experts to assess its eligibility as teaching material. After the module is declared eligible by the media experts, it is tested by eighth-grade students. The results of the recapitulation assessment from the media experts are as follows:

<table>
<thead>
<tr>
<th>Validator Number</th>
<th>Average Score</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.20</td>
<td>Eligible</td>
</tr>
<tr>
<td>2</td>
<td>4.15</td>
<td>Eligible</td>
</tr>
<tr>
<td>Average</td>
<td>4.17</td>
<td>Eligible</td>
</tr>
</tbody>
</table>

Recapitulation of the result of expert media appraisal in Table 1 obtained by an average score of media validator I appraisal 4.20 with the eligibility criterion of a product which is worthy to be used, media expert II is 4.15 with a criterion suitable to be used. The average assessment of media experts obtained 4.17. Thus it can be concluded that the module was assumed can improve students’ learning motivation on Catholic subjects. From the aspect of the media declared worthy of use and can move on to the next stage. Recapitulation of the validation results of material experts can be presented in below table.
Recapitulation of the results of expert media assessment in Table 2 obtained an average of expert material assessment I of 4.55 with eligibility criteria is feasible to be used, material expert II of 4.25 with eligibility criteria used. The average assessment of media experts obtained 4.40. Thus it can be concluded that the material was suitable to use in the class to improve the motivation of junior high school students. From the material aspects, it is declared eligible to be used and tested to the next stage.

3.4. Implementation

After the instrument and module have been declared eligible to be used by the validators, the next stage is to implement the book in eighth-grade students at Junior High Schools. The stages done during the implementation stage are, first, introducing the module to students; second, all 120 students use the module as an additional supplement in their learning activities; third, the students study independently, after completing several activities in the module they study together guided by the researchers as their teachers by using the direct learning model; fourth, at the end of the learning process, the researchers give the students a questionnaire of motivation to study after using the teaching material; and last, at the last meeting the researchers conduct an evaluation related to the students’ learning results.

3.5. Evaluation

An evaluation is carried out in order to reveal the results of students’ motivation to study religion after using the module as the teaching material. After the feasibility of the religion module as a teaching material has been revealed, the increase in students’ motivation to learn is measured. The pre-validated questionnaire of learning motivation which has been validated is done prior to the learning process using religion module as the teaching material. Besides, filling out the final learning motivation questionnaire is done after the learning process is over.

Two questionnaires of learning motivation before and after the learning process are compared to reveal the score of the increase in students’ motivation to study. The questionnaire was arranged by including the diligently of doing assignments, resilience in facing difficulties, the emergence of needs and courage to study, learning independently preferences, bore level on routine tasks, ability to defend opinions and the existence of hope and aspiration in learning as indicators. The result of learning motivation of experimental students before and after being given treatment with religion module is as follows.

<table>
<thead>
<tr>
<th>Test</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>t</th>
<th>df</th>
<th>Sig.(two-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td>45.00</td>
<td>85.00</td>
<td>62.9851</td>
<td>8.91074</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-Test</td>
<td>52.50</td>
<td>92.50</td>
<td>70.3731</td>
<td>8.82547</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paired</td>
<td>-7.3880</td>
<td>5.06460</td>
<td>-11.941</td>
<td>119</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result of the questionnaire analysis of students’ learning motivation after using the module shows a higher average score than before. So it can be concluded that the learning with reflective pedagogy in religion module can provide the impetus necessary to improve student learning motivation in learning activities.

Based on what has been carried out developmental research produces instructional material. The quality of this accounting booklet is included in the “Very Worthy” category. The statement can be proved from the analysis results of the “Very Good” assessment of both the expert media experts and material experts, as well
as in small group trials and field trials. Learners are happy with this product because they are interested in learning and obtaining new information.

The opinion of learners is seen as an excessive aspect of the product. Among them, is an interesting activity and the contents of the book are easy to understand. This is in addition to the advantages of this product, as for the disadvantages, including more information from the internet browsing. The existence of some weaknesses, attention and further development efforts can be done by obtaining better product results. This fact will further open opportunities for further improvement.

The module is designed with interesting concepts and it’s easy to understand the material so that students feel interested in learning and we can increase the knowledge of learners. From the results of the analysis of module during product trials, we can conclude that there are benefits for learners and teachers. Learners are interested in studying religion by observing the process of understanding moral value of that exists in the module. Learners become more knowledgeable about respect to other and its application. The learner’s knowledge increased regarding the the implementation of each moral value so that it can be implemented correctly.

According to the interview results, the module can be used by the teacher as a learning resource for learners. Teachers find it easier to introduce how to respect in other to learners by using the challenging activity. The utilization of module still has some obstacles. It is only design for limit standard competence and sector. To be continuously used it still needs to be developed. In the future, the module is expected to be further refined.

4. Conclusions And Implications

The conclusions that can be drawn from this research are that 1) The process of developing a module as teaching material before passing through the stages of review and validation by was declared eligible to use. It was tested it on 120 eighth grade students at Junior High Schools to find out how the module influences the students’ motivation to study. The development of module which is based on teachers’ and students’ problem was essential (Ihssen, 2011). The improvement was assumed that can answer the practical need; 2) Based on the criteria of media and materials, the experts declare the module as an eligible teaching material and 3) there is an increase in students’ motivation to study after using the module as the teaching material. It can be drawn from the T-test analysis which showed that there is a significant improvement on students’ motivation after learning (Hadar, 2017; Jármai & Bérces, 2012). That was the most important result of this study. It supported the previous study stated that reflective pedagogy can potentially improve the motivation of learner (Font-Guzmán, 2014). Thus by this result, it is implied that the reflective pedagogy can be an alternative to solve motivational problem of learners.

The suggestions that can be drawn based on the conclusions are that 1) The module as an Catholic religion teaching material only uses a certain topic, so for further development, it is expected that other topics or materials should be used to provide variation on the Catholic religion teaching material, 2) Teachers are expected to be more creative and innovative in developing teaching materials that suit the students’ needs. It is supposed to create an interesting and fun learning process. In general, reflective pedagogy provides the ability to expand one’s own views of learning principles. In true Ignatian fashion, there is an infinite amount of knowledge one can acquire in the field of reflective pedagogy and a lifelong study of the subject should be pursued by concerted.

If one can effectively incorporate a reflection assignment into a religion course then there is no reason why you could not also extend reflective pedagogy to other courses. Religion is a very classical, and normative subject so that it is quiet easy to be attached (Csinos, 2010). The challenges of content of other courses are often quite distanced from that of humanities courses, where reflective pedagogy ideas are often already included. Therefore if religion can benefit from augmentation, we would argue that most courses that are taught in the traditional format can also gain from a reflective pedagogy addition. Moreover, course additions such as games, diaries, blogs, online discussion question and answer forums, presentations, contests, debates, may also be quite beneficial (Freeman, 2012).
The reflection task allowed the class to further understand and apply the theories that they had learned in daily life. If pedagogical additions can promote deeper and more thorough learning, then we would do our learners a disservice if we did not include some form of these augmentations in every module. Not only are in religion fields but it is also much more difficult for our students to attain gainful responsibility in the constantly creating better world. Anything we can do to assist students with the learning process, making them better prepared for life after school, is imperative and our responsibility.

References


A Study on the Processing of the System of Devshirme in High School History Books in Turkey and Serbia

Beytullah Kaya¹ & Nada Trifković²

¹,² Istanbul Sabahattin Zaim University, Humanities and Social Sciences Faculty Department of History Istanbul, Turkey

ABSTRACT

The establishment and expansion of the Ottoman Empire made it necessary to create new institutions in the field of state organization. The conquest of new land made possible by a strong administration and a strong military structure. Accordingly, the first state organization took place in the administration and military fields. In order to meet the needs of the soldiers and to create a strong military structure, at the beginning, the penchik system and then the devshirme system started to be implemented. This system which was implemented from 15th to 19th century became one of the bases of the Ottoman Empire. Devshirme system and its implementation achieved great social, political and military influence in the Ottoman Empire and the countries that were a part of it. Today, the devshirme system is described in different ways in the history books in the countries, which existed in the lands owned by the Ottoman Empire. This study intends to reveal how devshirme system is processed in the history books used in high schools in Serbia and Turkey. The research was realized through the document analysis of qualitative research methods. In this study it is shown that in Turkish high school history books devshirme system is handled in accordance with the academic commitment, while in the Serbian history books the concepts are including hostility. In addition, it is concluded that in the schoolbooks the devshirme system is processed according to the countries’ own perspectives.

Keywords:
Devshirme System, Serbia, Turkey, High Schools, History Books.

1. Introduction

It was inevitable that the Ottoman Empire, which started to expand in the 14th century, had to develop new institutions to evolve and expand its territory. In this context, the first area to which this applied in the state organization was military. The creation of a strong army became a necessity, both for strengthening the central authority and for extending the borders. To what extent it was necessary to introduce a new military system was especially evident during the Rumelia conquest. (Uzunçarşı, 1970, p. 100-102; 414-415; Kazıcı, 2018, p. 497) In order to establish a strong military system, Kazasker Chandirlı Kara Halil Pasha came to the idea of introducing a penchik system, which was also used by other Muslim states that existed before the Ottoman Empire. The penchik system refers to forming an army by taking every fifth prisoner by the state (Beydili, 2013, p. 450; İnalçı, 2009, p. 58; Özcan, 2007, s. 226) The soldiers that were taken with penchik system were learning Islamic and Turkish tradition and were receiving salaries. In this way, during the reign of Murad I,
the Janissary Corps was established. The date of the establishment of this corps is not certain, but according to some sources, it falls between 1363-1365 years. (Neşri, 1995, p. 199; İnalçık, 2006, p. 163) At the beginning of the 15th century, after the defeat of Yıldırım Bayazid in Ankara War, a civil war was started in the Ottoman state, a period known as the Ottoman Interregnum, during which the implementation of the penchik system was stopped. In order to keep the system in function and to ensure its development, a new “Devşirme” system started to be implemented. So, this system replaced the previous penchik system. (Kazıcı, 2018, p. 493-494; İnalçık, 2014, p. 127-128) The devşirme system first began to be applied among Christians living in the Balkans by taking one child among 40 families. Although this system was applied for the first time during the period of Mehmet Chelebi (1413-1421) it was validated in the period of Murad II (1421-1451). (Özcan, 1994, p. 254) According to the law of devşirme, it was decided to collect healthy and strong children between the ages of eight and eighteen, and this would be done every three to five years. Devşirme system was primarily implemented in Albania, Greece and Bulgaria, and then in Serbia, Bosnia and Herzegovina and Hungary. (Kazıcı, 2018, p. 494) The children that were collected with devşirme were first registered in the Esame books. Afterwards, they were given to Turkish families to learn Turkish customs and language. On the one hand, in this way, the children’s conversion to Islam was ensured and, on the other hand, the needs of the army were met. (Uzuncaşılı, 1988, p. 13) According to the rules of devşirme, children of Jews, Russians, Gypsies, Ajam, children of shepherds, orphans and children from families with one child could not be taken. Although this system was applied between 15th and 19th centuries and was more widespread in Balkans, since the end of the 15th century it was possible to find it in Anatolia, too. (Demir, 2017, p. 22) During the collecting of children, the names of their villages, sanjaks, fathers and mothers, the date of birth and the names of the dispatching officers were written in books and these books were kept in two copies. (Uzuncaşılı, 1988, p. 16-17) Children taken with devşirme, after spending some time in Turkish families, were brought to Istanbul, the conscripted boys were educated in the corps and the clever students were taken to Enderun school. The other students were transferred to various departments of the Janissary Corps. (Öztüna, 2006, p. 92) From the 16th century, the devşirme system began to deteriorate and lost its former value in relation to the emerging military technology in Europe. In the 19th century, in 1826, Sultan Mahmud II ended it by removing the Janissary Corps. (İnalçık, 2013, p. 58; Halaçoğlu, 1996, p. 53)

From the end of the 14th century the Ottoman Empire began to spread in the Balkans, and for a short time, the Ottomans dominated in countries such as Serbia, Bosnia and Herzegovina and Albania. The Serbian Empire, which began to disintegrate after the death of Emperor Dushan (1355), and the Serbs who were inhabited in Bosnia and Herzegovina, ruled by the Kotromanić dynasty (Ђурковић, 1982, стр. 7-8), with the Ottoman conquest of Smederevo in 1459 and Kljuc in 1463, came under the rule of the Ottoman Empire. Thus, both Serbia and Bosnia had to accept the dominance of the Ottoman Empire. (İnalçık, 2011, p. 32-35) After being included in the Ottoman Empire, these regions, as well as other parts of the state, were also divided into administrative units-sanjaks. In accordance with the Ottoman law, existing taxes were introduced to these regions and, as part of devşirme, children were recruited from these areas. Serbian, Bulgarian, Albanian and Croatian children who were gathered for the devşirme system, later had the chance to take part in the Ottoman army and even to become civil servants and to be senior executives in the state. Some of the children who were taken from these regions, found themselves in a high position in the state administration of the Ottoman Empire. Sokullu Mehmet Pasha is the most famous among them. (Hamzaoglu, 2004, p. 108)

After the Ottoman Empire began to decline, and since the concept of military service in Europe gained new dimensions, in the 18th century the Janissary Corps lost its former influence, and the collection of children with deshirmé was not carried out under strict rules. Nevertheless, the devshirme system was applied until the 19th century, when it was completely abolished during the reign of Mahmud II. Serbia remained under the Ottoman rule until 1878, when it gained independence with the decision of the Congress of Berlin. (Croajmenvi, 1981, p. 420) Bosnia and Herzegovina came under the influence of Austro-Hungarian Empire, which annexed this country in 1908. (Çetin, 2017; Özkan, 2016)

Although much time has elapsed since the disappearance of the devşirme system, the concept of Ottoman administration in the Balkans, as well as the implementation of the devşirme system, is still debated. Serbian sources and the Serbian people still see the Ottoman administration as a structure that enslaved people (Ђурковић, 1982, p. 313) and seen as a way to force them to accept Islam. Serbian sources describe the devshirme system in a different way from Ottoman or Turkish sources and call it “blood tax” or “tribute in
blood”. In addition, some sources emphasize that parents were often hiding their children in order to save them from devshirme. (Bopouroğlu, 1997, p. 312-313) Again, according to some sources, because the Ottomans used to collect only healthy boys, mothers were even hurting their children, in order to save them. (Çamapılı, 1993, crp. 30)

Although the subject of devshirme has come up in Serbian and Turkish historiography many times and a lot of works have been written on it, there is no comparative study on how it is handled in school books. One of the first works about devshirme in Serbian historiography is written in the end of 19th century by Jovan Tomić. In his work called Danak u Krvi Tomić mostly focused on European travelogues, and that is why this study is incomplete. After that, in the 20th century, Radovan Samardzić, with his study called Beograd i Srbija u Spisima Francuskih Savremenika XVI-XVII veka, made a great contribution to the research of the devshirme system. In Turkey, one of the most important studies about devshirme, called Devşirme Usulü ve Acemi Oğlanlar, written by Ahmet Rejik, was published in 1926. But the most comprehensive work about devshirme is written by historian İsmail Hakkı Uzunçarşılı. (Matkovski, 1969, p. 273-274)

In order to show how the devshirme system is being presented in Serbian and Turkish sources, the contents of historical schoolbooks used in Serbian and Turkish high schools are analyzed in this study. The study attempts to show how the devshirme system is predisposed in the textbooks of those countries, what the differences and similarities in their representation are, and whether and to what extent the hostile terms are used in lessons.

2. Method

2.1. Model of the Research

In this study, a qualitative method was used in order to examine the ways in which the subject matter of the devshirme was processed in the Serbian and Turkish high school books. Qualitative research method was preferred because of the fact that it is appropriate to reveal the underlying causes of a case and to enable the historical researches of historical subjects. (Yıldırım & Şimşek, 1999, p. 19) Case studies are used in order to present and describe the existing situation. (Yin, 2003, p. 47) Document analysis method was used in order to determine how the topic of devshirme was showed in textbooks in high schools in two countries. In this context, history textbooks of high schools in both countries were examined. (Yıldırım & Şimşek, 1999, p. 140) The findings of the study were directly referenced in order to increase the reliability of the data using descriptive analysis method. (Yıldırım & Şimşek, 1999, p. 159) The findings are presented comparatively.

2.2. Sample of the Research

The sample of the research is composed of a historical textbook for the 10th grade of high schools in Istanbul, prepared by the Turkish Ministry of Education and a textbook for the 3rd grade of the Sociolinguistic schools in Serbia, prepared by the Ministry of Education of the Republic of Serbia.

2.3. Limitations of the Research

The research findings of this study were limited to historical schoolbooks for the 10th grade of high schools in Turkey and historical schoolbooks for the 3rd grade of the Sociolinguistic schools in Serbia. Since several different historical textbooks are used in Serbian sociolinguistic schools, only three of them are analyzed in this study. All of these books were prepared and published under the supervision of the Ministry of Education. In addition, the study is limited by the method of document review carried out for the purpose of gathering information.

3. Findings

In the history textbook taught in Serbian high schools and prepared by Radoš Ljušić (Abyurt, 2012), devshirme system and the Ottoman military structure are explained as a part of the lesson Ottoman Empire (16-18th century) under the title State Structure. Here, the army structure in the Ottoman Empire is described in a paragraph with eight sentences. In the continuation of the same topic, the slightly larger paragraph also provides information on the devshirme system. Despite the definition of the devshirme, no description is given about the origin of this system, but it is stated that the children that were taken with the devširme became the sultan’s slaves. It is also emphasized that the devshirme represented a sign of the Ottoman ruthlessness
towards the Christians. In this book it is said that parents, in order to save their children from devshirme, often used to hurt them or to marry them, even if they were just 8 years old. This situation is expressed in a schoolbook in the following way: ‘Da bi спрели одвођење деце, родитељи су обогањивали децу секући им прсте или их женили младе, чак и са осам година, пошто су ожењени били изузети од данка у крви.’ (In order to prevent the taking away of their children, parents used to injure them by cutting their fingers off, or marrying them young, even at the age of eight, because married boys were exempt from devshirme). (Љушћић, 2012, p. 60) According to information from the same page, some parents were giving children voluntary for money in order to ensure their progress on the social scale. According to Ljušiće’s assertions (2012, p. 60) the children gathered by devshirme were taken to Bursa and Istanbul, where they were employed as slaves, forced to accept Islam, and then after learning the language they were being educated. (“Биране према физичкој и интелектуалној обдарености, ови деци су смењтани у Истамбул или Бурсу, где су неко време радили као робови, насилио примали ислам, учили турски, проналазили кроз војну обуку, а обдаренији завршавали посебне школе.”) (Љушћић, 2012, р. 60) According to the explanations from the book, after education, some lads were moved to the army, while some of them could be promoted to important state positions. In the book, as an example of high-ranking officials in the state service, Sokullu Mehmet Pasha is shown, a Serb, taken with devshirme to Istanbul in the 16th century, and who became the vizier of three sultans. (Љушћић, 2012, s. 60) In another chapter of the book, in lesson Pech Patriarchate, it is stated that Sokullu Mehmet Pasha played an important role in the renewal of the Serbian church in 1557, and that in this way he wanted to help his people. (Љушћић, 2012, p. 75)

In another history schoolbook used in Serbian high schools and prepared by Dragomir Bondić and Kosta Nikolić (Бонџић, Д. Николић, К., 2014) the devshirme topic is presented as part of the lesson Serbian People in the Ottoman Empire from 16th to 18th Centuries under the title The Position of Serbs in Ottoman Empire. In this source it is claimed that devshirme system started to be used in the Ottoman Empire in 1420 and that it was a special form of Muslims violence against Christians. As the principle of the devshirme system, it is stated that the Ottomans were taking children from 7 to 20 years old from Christians. It is also emphasized that the implementation of the system of devshirme was remembered as one of the cruellest institutions in the Ottoman Empire (“…остао је упамћен као једна од најокрућнијих установа које су икада постојале у Османском царству”). (Бонџић, Д. Николић, 2014, p. 70) This source also provides examples and information similar to the previous book. In the same way Sokullu Mehmet Pasha is taken as an example and it is told that he and other taken children after coming to important state positions were helping their people by building bridges, caravanserais and fountains. (Бонџић, Д. Николић, 2014, p. 70)

In the book prepared by Aleksandra Kolaković and Minja Milinović (Колаковић & Милиновић, 2016), and used in history lessons in high schools in Serbia, devshirme system is described in lesson Serbian People in the
Ottoman Empire Between the 16th and 18th Century. In this book it is described in the part The Life of the Serbs in the Ottoman Empire with special title Blood Tax (“Данак у крви”).

The information presented in the book is very short and does not include details. According to the information in the book, the Turks used to take Christian children between seven and fourteen years of age, mostly from Serbs, every third or seventh year, and they were taking them to Edirne or Istanbul, and were forcing them to accept Islam. The children taken with devshirme were educated in state centers according to Islamic rules. They could become janissaries or take part in the elite group of soldiers to protect the sultan or could take part in the state administration. Although children were taken only from Christians, it is expressed in schoolbooks that in some cases Muslim families in Bosnia were giving their children voluntarily. In this way they wanted to ensure important state positions for their children. As in previous textbooks here is also stated that parents were often hiding, marring or injuring their children in order to save them from the devshirme. ‘Хришћани су настојали да заштите своје синове од данка у крви на разне начине—сакривање, сакање, рана женидба.’(Колаковић & Милиновић, 2016, p. 89) As in the previous contents, Sokullu Mehmet Pasha is shown as an example again here, and it is emphasized that he had a very important role, especially in the renewal of the Pech Patriarchate.(Колаковић & Милиновић, 2016, p. 87-90)

In Turkish high school books, the theme of the devshirme is described in the third unit called Warriors and Soldiers in the Process of Statehood as part of the lesson Janissaries and Devshirme System. (Yüksel, 2018) The explanation of the devshirme system begins with an explanation of its origin and the information about penchik system is also given. According to the textbook explanation, during the Ottoman conquest of Rumelia, the number of prisoners increased, and Kazasker Chandarlı Kara Halil Pasha got the idea to take advantage of the prisoners and introduced a penchik system. In this way, every fifth prisoner in the Ottoman State was taken for the army.(Yüksel, 2018, p. 86) The penchik system led to the emergence of a new institution in the military. In the textbooks, it was pointed out that based on the penchik system in the Ottoman state, a new military institution developed the so-called Janissary Corps. When the prisoners started being educated in the period of reign of Murad I, a new institution called Acemi Oğlanlar Ocağı was established. Over time it turned out that the penchik system was not sufficient to meet military needs, so after Ankara war, this system was completely abolished, and in its place a devshirme system was introduced. According to the explanations in the book, the devshirme means taking Christian children, not only from the Balkans, but according to the needs from other areas too, then their education and then transferring to the Kapikulu troops. Turkish schoolbooks also provide information about which children couldn’t be taken away with devshirme, such as Jewish children or children living in cities.

In the same book, information about the implementation of devshirme is also provided. According to this explanation, only boys between 9 and 14 years of age could be included in devshirme, and only in rare cases the older lads were taken too. During the devshirme, in collection of children, the aid was provided by pops, kadis and beys, and all information about children, such as the names of the parents, even the eyes and hair color were written in special notebooks. Again, according to the information in the book, special attention was given to the physical appearance of children and tall children were taken more than others. It is stated that the children were taken to the center of the state where they were accepting Islam, taking Islamic names and these new names were recorded together with the previously recorded information. It is also explained in the book that the children gathered by the devshirme system and janissary who served to the Ottomans had to show loyalty to the sultan and in case of their replacement they had to accept new sultan and swear their allegiance to him. (Yüksel, 2018, p. 88-89)
4. Conclusion and Discussions

In the Ottoman Empire between the 15th and 19th century, the devshirme system contributed significantly to the strengthening of the Ottoman military structure. With the empowerment and expansion of the state, the system was implemented more effectively and many children from the Balkans were taken. Considering the situation from the point of view of the Ottoman State, it is a general historical fact that devshirme was a system that provided the benefit to the state. On the other hand, a lot of negative perceptions have been developed among the people in Serbia, and other Balkan countries, where the devshirme system was implemented, and it is understood that people did a lot of things in order to save their children from devshirme. The judgments in the history books used in Serbia confirm this argument. The implementation of this system has caused a negative perception among Serbs living in Serbia and Bosnia Herzegovina. It can be concluded that in Serbian historical textbooks the term “blood tax” is used for devshirme and as result, negative ideas about this system have been created. In addition, it is understood from the findings of the study that the content devoted to the devshirme system in Serbian textbooks is very obscure and that it is aimed at ensuring that the system is perceived badly by the Serbian people. On the other hand, the example of Sokullu Mehmet Pasha in the Serbian textbooks, including his renewal of a church to help Serbian people, shows that the contents of the textbooks are inconsistent.

At the same time, Turkish history textbooks provide detailed information about the origin of the devshirme and penchik system, as well as the reasons and needs of implementation of this system. Also, in Turkish history textbooks it is explained that the implementation of devshirme system started after the Ankara War (in Serbian books after 1420). In Turkish schoolbooks' explanations it is not possible to see some negative and hostile aspects about devshirme. In other words, there is no content about how the implementation of this system is seen by other societies. However, in Serbian textbooks, this issue is shown as an example of the persecution, violence and ruthlessness of the Ottomans against Christians. It is pointed out that families, in order to save their children, were hiding, injuring or marrying them young. These contents in the textbooks show that the concepts of hostility still exist in Serbian textbooks. In Serbian schoolbooks, the word “slave” is often used in the description of devshirme. In other words, the position of the children collected during devshirme is expressed by word “slave”. The word “violence” is one of the concepts used to describe the acceptance of Islam by children. According to the expressions in the books, children were forced to accept Islam. But in Turkish schoolbooks there is no information about this kind of implementation of devshirme system. Again, one of the differences between the contents of the books is related to the age of the collected children. Thus, in Serbian books it is stated that during the devshirme children between 7 and 20 years old were gathered, while in Turkish books it is stated that children between 9 and 14 years old were taken. In Serbian books, apart from the fact that the devshirme represented a form of Ottoman violence against the Christians, there are no other facts about the implementation of this system presented. But in the Turkish history textbooks it is stated that in devshirme and collecting of children, priests and kadis took part and that all information about children and their families were registered in special notes. What is interesting is that Sokullu Mehmet Pasha is shown as an example in the textbooks of both countries. The help he gave to the Serbian people, especially in the renewal of the Pech Patriarchate, is emphasized in the books of both countries. It means that Sokullu Mehmet Pasha’s opening of the Serbian church as the grand vizier in 1557 and appointing his brother Makarye as the patriarch is seen as a common theme in the textbooks. (Afyoncu, 2009, p. 355) This narrative can be seen as an example that the children could find their families when they wanted to. This shows that some of the information in the Serbian textbooks does not correspond to the historical reality.

There is no significant difference between the photographs used in history textbooks of both countries, and even some of the photographs used in those textbooks are the same. In the light of the findings obtained from the study, it is seen that the devshirme system is remembered as a special form of violence against the Christians and Serbs in the consciousness of the Serbian people. Also, this is reflected in the information presented in the Serbian high school books. As educational material, textbooks have a significant impact on students’ perceptions of other countries. That is why the terms used in Serbian textbooks in description of devshirme such as slave, violence, cruelty etc. can affect the students’ perception and foster the feelings of hostility. It can be concluded that using this kind of terms can create a negative image not only about Ottoman Empire, but also about Turkish people. On the other hand, in Turkish schoolbooks it is not possible to see a negative and hostile terms in the description of devshirme. It is understood that in Turkish textbooks
devshirme subject is presented according to the academic level of the students and that the subject is evaluated in the context of Turkish history, without showing any empathy to other nations and their understanding of devshirme.

In the light of the study, it can be suggested to remove the terms that express the hostility in the history textbooks, and include academic information that would create emotional perception in children. Also, it can be suggested to conduct the research on how the question of devshirme is perceived today in the countries that were a part of the Ottoman Empire.

References