RELATIONSHIPS BETWEEN WELLBEING, RESILIENCE AND SCHOOL CLIMATE

E. COCORADĂ[1]   I. E. ORZEA[2]

Abstract: *How happy students are at school is a relatively recent question in the public area. Using a sample included students enrolled in secondary education, our study aims to analyze the relationships between school climate, well being and resilience. The results show that the participants with higher well-being and resilience report a favorable school climate, and the boys report higher well being compared to girls, and girls more seek novelty. Cluster analysis indicates the following sets of the variables: Emotions, Openness and Learning support. The findings may be useful to school counselors in implementing interventions focused on positive consequences of the school climate on the students' satisfaction with their school life.*

Key words: *well being, resilience, school climate, secondary education.*

1. Introduction

How happy students are at school and what is the roles of the school in protecting pupils' health are two relatively recent questions in the public area, and dedicated research is scarce. For many years, the objective of the school has been the effectiveness, followed by decrease violence and in latest trend – the focus is on the wellbeing (Blaya, 2006). The school climate is a psychological and sociological construct from both individuals' behaviours and the subjective and collective perception of the learning environment (Blaya, 2006; Cohen, McCabe, Michelli, & Pickeral, 2009). The interest of research on school climate is explained by their consequences on the school persistence and achievement (Galand, Hospel & Baudoin, 2012), on bullying that affect both the involved individuals and the whole school community, on the mental health and wellbeing (Aldridge, & Ala'i, 2013; Seligman, 2011) or students' life satisfaction (Suldo, Thalji-Raitano, Hasemeyer, Gelley, & Hoy, 2013). Achieving both educational goals and pupils' well-being is the new finality of contemporary school.

1.1. Literature Revue

Consensus on the definition of well-being is limited, but it is almost unanimous that it indicates the presence of positive emotions and the absence of mental health disorder (AIHW, 2012). Well-being has been described as a fundamental quality of life and

---
[1] *Transilvania* University of Braşov, elena.cocorada@unitbv.ro
[2] *Radu Negru* High School, ioana_orzea@yahoo.com

productivity of individuals, families, communities and nations, associated with tendency to be proactive and creative. The Australian Institute of Health and Welfare (AIHW, 2012) addresses well-being in line with the Bronfenbrenner and Morris (2007) environmental model of human development as an interaction of the individual with a particular environment. The well-subjective, as it results from its name, does not contain the same dimensions for each individual, being perceived and interpreted based on the person's perception of his own life, on the events he or she meets. The wellbeing is defined as the equilibrium point between the individual's resource and the challenging events of his life (Dodge, Daly, Huyton, & Sanders, 2012). However, part of the variance in well-being can be attributed to environmental factors, school and work conditions (Diener, Lucas, & Scollon, 2006). Some studies have shown that pupils who have been victims of violence have been declared to be generally single and unhappy (Kochenderfer & Ladd, 1996), which has been associated with the development of psychopathology (Ronning, Handegard, Sourander, & Morch, 2004) would be loss of self-esteem, anxiety and depression (Peterson, Ruch, Beermann, Park, & Seligman, 2007; Seligman, 2011).

The term *resilience* refers to the ability to cope with difficulties and to achieve goals despite existing obstacles, which reflects good outcomes in the presence of major difficulties (Masten, 2007) and predicts low levels of stress (Hjemdal, Vogel, Solem, Hagen, & Stiles, 2011). High resilience is associated with high school outcomes, and this connection has directed some researchers to differentiate between psychological resilience and educational resilience. This approach of the concept *resilience* highlights the existence of personal protective features (Bernard, 2004; Zimmerman, 2013): high self-esteem, an internal localization of control, optimism, high social skills, high academic intelligence, capacity to problem solving, autonomy, purpose in life (the protective factors model). On the other hand, this approach highlights the existence of risk factors such as poverty, close-range violence, and reduced family and community resources. In the school environment, the educational / academic resilience is defined as the characteristic of students who achieve high school performance in the presence of high risks: adversity, low socio-economic status, family conflicts (Alva, 1991; Zimmerman, 2013). We mention that there are other approaches to academic resilience, as self-reported trait (Anghel, 2015).

Past studies that analyzed the influence of the school climate on resilience maintain that in schools that strengthen students' resilience, there are supportive relationships between schools actors, higher academic and social expectations, opportunities for significant student participation in school life. Relationships with pro-social individuals, clear and profound relationships and the teaching-learning of life skills reinforce resilience (Bernard, 2004). A relatively recent study carried out on the Romanian urban population shows that psychological resilience is lower for pupils with low marks and many absences, compared to students who rarely absent and have higher grades, except for the novelty seeking scale (Anghel, 2015). The cited author shows that 70.5% of adolescents participant are exposed to high risk levels.

The two constructs, school climate and resilience, have been studied in parallel, but their related analysis can bring new information on the reciprocal interactions, but in the psychological literature, there are few studies examining the conjugate of the two constructs. All dimensions of the school climate are related to the well-being of students:

these associations are direct on teacher support and connection to school, affiliation but are mediated by resilience and other traits such as ethnic and moral identity and life satisfaction (Aldridge et al., 2013). Research has shown that a positive climate is associated with well-being, increase motivation for learning (Eccles et al., 2011) decrease the violence (Cocoradă & Clinciu, 2009), develops the ability to respond to challenges and find solutions. Safety at school and colleagues' support, as positive facets of the climate, are predictors of pupils' well-being (Thapa, Cohen, Higgins-D'Alessandro, 2013).

Adolescence is recognized as a period of challenges and risks, a period marked by academic and relational stress that strongly demands the adaptability of the individual. This period become it self a risk factor through hormonal changes, the transition to a new educational cycle with higher standards than previous cycles (Cunningham & Swanson, 2010; Oshio, Kaneko, Nagamine, & Nakaya, 2003). Also more adolescents need high resilience and their wellbeing is threatened. This research use as theoretical frame the cultural-ecologic model witch support that the relationships between personal traits and various environments (culture, school climate, and family) are integrated and establish mutual relations of influence (Bronfenbrenner & Morris, 2007).

1.2 Objectives and Hypotheses

Our study aims to examine and better understand the relationships between students' well being, resilience and their perception on school climate. The hypotheses of this quantitative study were: H1. There are gender differences in well-being and psychological resilience; H2. A favorable perception of the school climate is associated with well-being and high resilience; H3. The high performances of the students are directly associated with the state of well-being and psychological resilience; and H4. Resilience, pupils' well-being and school climate perception form clusters.

2. Material and Methods

The analyses presented in this paper are based on data collected on the 303 students in secondary education, enrolled in four schools, high school (9th - 12th grade) and middle school (7th and 8th grade). The sampling was based on a two steps procedure: first are selected the schools, second, the classes in each school. The sample includes 50.7 % girls and 49.3% bois, 60.7% enrolled in the middle school. All questionnaires were administered in a paper-pencil format, during courses, after obtaining the informed consent of both the principal of school and the participants. The participation was voluntary and unpaid. In our sample, parents of disadvantaged pupils have secondary education and low-level occupations (unemployed, housewives, unskilled workers, commerce workers), while parents advantaged students have higher education and intellectual occupations.

The tools used have been demonstrated to have good reliability and validity in our research and previous studies. School climate questionnaire (Orzea, 2016) has 72 items, grouped in 7 factors: Student affiliation with school, Inter-college student relationships, Teacher-student relationships, School leadership, Order / Security / discipline, School enrollment, Teacher engagement. Correlations between the factors are weak or moderate

(between 0.39 and .54), the internal consistency is acceptable, Cronbach alpha coefficients being between .74 and .85, and 0.94 for the global climate. Adolescents Wellbeing Scale (AWS), developed by Birleson (1980), is a self-reported scale that relates to different aspects of adolescent life, and how they feel about them. Having a one-factor structure, the AWS includes 18 items, with alpha Cronbach .77. We chose a scoring way where high scores indicate high well-being, and low scores show negative emotions. Adolescent Resilience Scale (ARS), developed by Oshio et al. (2003), has 21 items, grouped into three subclasses: Novelty Seeking (7 items, alpha Cronbach -72), Emotional Regulation (9 items, alpha Cronbach – 054), and Positive Future Orientation (5 items, alpha Cronbach .76). For entire scale, alpha Cronbach is .81. The Socio-demographic Questionnaire requested data on the level of studies and occupation of parents, number of siblings, school performance, school, class, and gender. Based on studies and occupation of parents we calculated the index of socio-economic status (SES).

3. Results

Means, standard deviations, and correlations between the variables are presented in Table 1. The majority of students reported a high level of wellbeing (96.5% - score higher than 1.5 on the 3 point scale) and a high level of resilience (98% score higher than 2.5 on the 5 point scale). Differences between boys and girls are statistically significant only for *Novelty Seeking* (t = 2.68, p <.01, girls having a higher average score and week standard deviation, and for wellbeing (t = 3.68, p <.001), boys are a higher average score and week standard deviation. Regarding the SES, 27.9% of the participants are disadvantaged (in the bottom quarter), and the 26% are advantaged (in the top quarter).

Well-being is positively associated only with student-student relationships, teacher-student relationships, students and teachers school implication and global climate (Table 1), and resilience is positively and significantly associated with all investigated variables (Table 1). The data support the hypothesis that the global school climate is associated with all variables investigated, and correlation coefficients are statistically significant. Wellbeing is associated with resilience and its subscales, the coefficients, statistically significant, being between .19 and .25 except *Emotional Regulation*.

In the Pisa Results (2015), is highlighted that the SES family index is associated with school performances, an expected finding. According with data' processing in PISA 2105, we have determined the educational resilience, with an objective measure. The resilient students in this approach are the students who obtain higher performances than those predicted by the SES. 'A student is classified as resilient if he or she is in the bottom quarter of the PISA index of economic, social and cultural status in the country / economy of assessment and still performs in the top quarter of students among all countries after taking their socio-economic status into account' (OCDE, 2015, p. 230). Using this method to determine educational resilience, 15.3% of participants who are socio-economically disadvantaged and have very good grades (in top quartiles, over percentile 90) were identified in our study. School performance depending on resilience' categories are different (p between .007 and .001), level of performance being lower on the students with lower level of resilience. Additionally, differences between groups

regarding school performance are higher that differences within groups (F = 9.53, p<.001).

Descriptive statistics and correlation concerning the variables of the study   Table 1

Variables	M	SD	Pearson correlations												
			1	2	3	4	5	6	7	8	9	10	11	12	13
1 Belonging at school	3.2	.7	1												
2 Students' relationships	4.1	.7	.37**	1											
3 Teachers-students relationships	4.1	.7	.64**	.38**	1										
4 Leadership	3.8	.9	.52**	.20*	.59**	1									
5 Safety/ security/ discipline	3.8	.8	.46**	.43*	.53**	.39**	1								
6 Students school implication	3.9	.6	.61**	.42*	.55**	.52**	.46**	1							
7 Teachers school implication	3.8	.7	.64**	.35*	.76**	.75**	.50**	.66**	1						
8 Global climate	26.9	4.0	.63	.75	.78	.73	.55	.74	.84	1					
9 Wellbeing	2.5	.2	.12	.25**	.16*	.14*	.11	.16*	.19**	.21**	1				
10 Novelty Seeking	4.1	.6	.29**	.38**	.24**	.16*	.23**	.36**	.26**	.36**	.37**	1			
11 Emotional Regulation	3.1	.5	.18*	.26**	.1	-.03	.1	.21**	.08	.17*	.08	.72**	1		
12 Positive Future Orientation	4.2	.6	.21**	.28**	.21**	.19**	.23**	.24**	.28**	.31**	.42**	.73**	.16*	1	
13 Adolescent Resilience total	3.7	.4	.27**	.29**	.22**	.19**	.16*	.39**	.21**	.32**	.31**	.75**	.45**	.33**	1
14. Index of SES	-	-	.17*	.02	-.35**	-22**	-.07	-.01	-.24**	-.22**	.19**	.11	.08	.10	.07

To test the latter hypothesis, we have run a hierarchical cluster analysis using the Ward's method (Yim, & Ramdeen, 2015). The dendrograme groups the dimensions of the school climate with the state of well-being and the resilience subscales, all variables being continuous, transformed into z-scores.

Figure 1 shows the presence of several clusters, grouped in 3 sets: (1) The *Emotions,* cluster including *Belonging at school*-F1, *Emotional regulation* and *Students-students relations-F2*; (2) The *Openness* consists of Wellbeing, Novelty Seeking and Positive Orientation towards the Future, witch merges with the cluster (3) *Support to Learning /* School care, resulting from the grouping of *Students school involvement-F6, Teachers school involvement-F7, Teachers-students relationships-F3, Leadership-F4,* and *Safety Climate-F5*. Using the average linkage method, the clusters are identical.
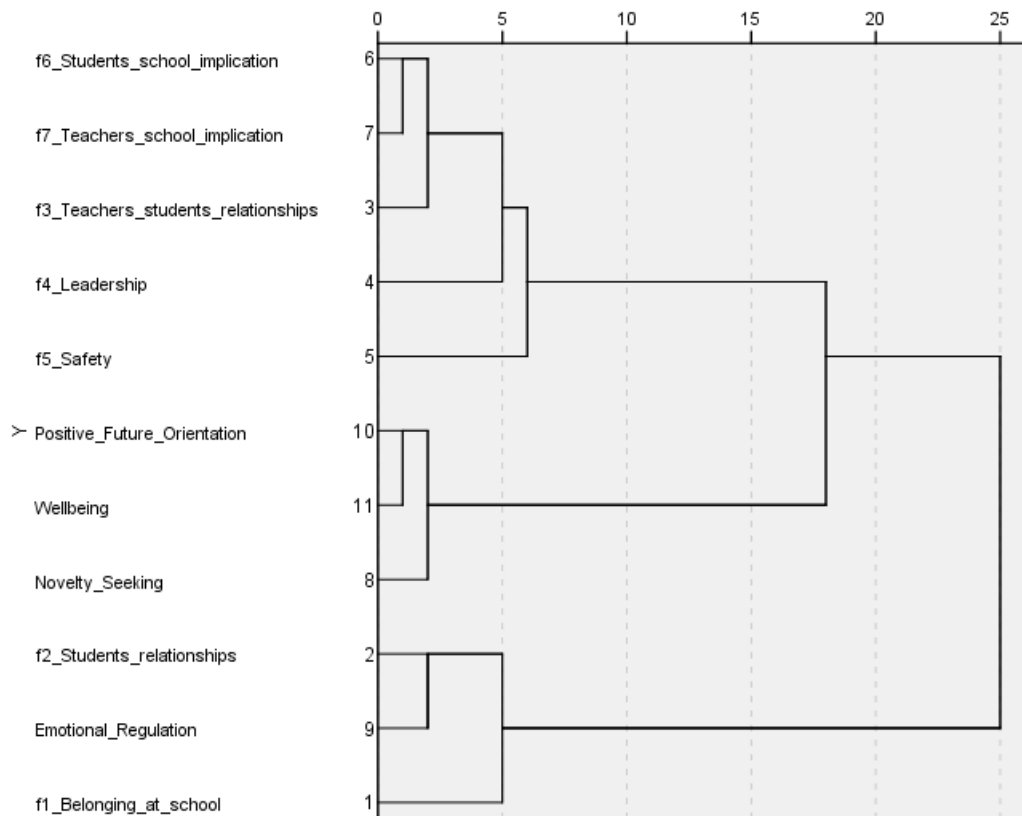

Fig. 1. *Dendrograme using the Ward's Method*

3. Conclusions and Discussion

This study aims to examine the relationship between well-being, resilience and school climate in secondary school students. A very large number of students report levels at least average of well-being and resilience. The data partially support our assumptions. Differences between boys and girls are statistically significant only for novelty seeking, more on girls, while the state of well-being is higher for boys. Resilience studies show dissimilar results: thus, some claim that girls are more resilient (DuMont, Widom, & Czaja, 2007), others identify higher levels of resilience in boys sub-sample (Tusaie,

Puskar & Sereika, 2007). In our study, wellbeing is higher on boys that have more resources than challenges, confirming past findings (e.g., Dodge et al., 2012).

Students who are happy at school perceive the climate as favorable, but the most significant associations are related to relationships with students-students relationships, teachers-students relationships, students and teachers school implication. The data confirm the explanations that consider the well-being connected on the student's social relationships system (Burke, 2014). A recent study (Aldridge, et al., 2015) shows that well-being is associated with a more favorable perception of all aspects of the school climate, result confirmed by our investigation. Good emotional regulation ability, novelty seeking, and a positive direction towards students' future are accompanied by high well-being and favorable perceptions of the climate. Our data also support the hypothesis on the association of the global school climate with all the variables investigated, being convergent with a survey carried out on an urban sample (Anghel, 2015).

In our study, wellbeing is directly associated with resilience, confirming other studies (Aldridge et al., 2015). A healthy, open school environment based on shared norms and close social relationships are reported by students who live a higher well being, are able to adjust their emotions, project their future and are receptive to novelty. Surprisingly, Safe / security / discipline in school do not correlate with the well-being of students.

In recent investigation of PISA, conducted on 15-16 year old students, the Romanian academic resilient students are 11%, well below the OECD average (Pisa 2015, p. 223). In the present study, it exists a similar group, representing 15% of the entire sample, under the PISA global average, but over the same Romanian average. Although school reproduces SES patterns, small marks do not directly result from a low SES because school distributes resources to some disadvantaged students (Downey & Condron, 2016) or the students' are strong personality traits. As Bourdieu and Passeron states (1977), schools might reproduce some inequalities, but they could also compensate them for others as socio-economic disparities in cognitive skills (Downey, & Condron, 2016).

According to cultural-ecological model, the personal and environmental variables (well-being and resilience, respectively, and the school climate dimensions) were grouped into three sets. The *Emotions* cluster includes similar variables, affectively marked. The sub-set called *Openness* includes positive future orientation, the novelty of seeking and wellbeing, who the wellbeing can facilitate students' response to the major demands of the school. These findings are convergent with past research that found wellbeing as a source for energy (Gailliot, 2012), embedded with the relationships (e.g. Burke, 2014). Subsection *Learning support / School care* includes more aspects of school climate and confirm the close relationships between the environmental and personal factors (Seligman, 2011; Zimmerman, 2013).

These findings may be used with caution because the sample is small and selected from one city. In addition, it was not possible to know exactly how the students interpreted the terms used in questionnaires. Future research can be focused on differentiate resilient students from disadvantaged student or non-resilient students, introduce others variables important in the academic field, extend the sample, compare the schools advantaged and

non advantaged and their climates. Compare the academic resilience and self reported resilience can be other attractive goal.

The present study provides empirical evidence about the connection between school climate, wellbeing and resilience in secondary education, a theme more debated latest years. The findings suggest many novel hypotheses, and can be a starting point for others researches. They may be too useful to school counselors in implementing interventions focused on positive consequences of the school climate, on the students' satisfaction with their school life, or to improve academic resilience and wellbeing.

Other information may be obtained from the address: elena.cocorada@unitbv.ro

References

***AIHW. (2012). *Social and emotional wellbeing: Development of a Children's Headline Indicator* (Vol. Cat. no. PHE 158). Canberra: Australian Institute of Health and Welfare. http://www.aihw.gov.au/publication-detail/?id=10737421524

Aldridge, J., & Ala'i, K. (2013). Assessing students' views of school climate: Developing and validating the what's happening in this school (WHITS) questionnaire. *Improving Schools*, *16*, 47–66.

Alva, S. A. (1991). Academic invulnerability among Mexican-American students. The importance of protective resources and appraisals. *Hispanic Journal of Behavioral Sciences*, *13*, 18-34

Anghel, R. E. (2015). Psychological and Educational Resilience in High vs. Low-Risk Romanian Adolescents, *Procedia - Social and Behavioral Sciences, 203,* 153 – 157.

Bernard, B. (2004). *Resiliency: What we have learned*. San Francisco, CA: WestEd

Birleson, P. (1980). The validity of Depressive Disorder in Childhood and the Development of a Self-Rating Scale; a Research Report. *Journal of Child Psychology and Psychiatry*, *22,* 73–88.

Blaya, C. (2006). Harcèlement et maltraitance en milieu scolaire. Paris : Armand Colin.

Bourdieu, P., & Passeron, J. C. (1977). *Reproduction in Education, Society, Culture*. Beverly Hills, CA: Sage.

Bronfenbrenner, U., & Morris, P. A. (2007). The Bioecological Model of Human Development. *Handbook of Child Psychology*, *1*, 14-16.

Burke, C. (2014). An Exploration of the Effects of Mindfulness Training and Practice in Association with Enhanced Wellbeing for Children and Adolescents. *Wellbeing*, 6, 1–44.

Cocoradă, E. & Clinciu, A. I. (2009). Climate connected to assessment in secondary education. *Cognition, Brain, Behaviour. An Interdisciplinary Journal*, *13*(3), 341-362.

Cohen, J., McCabe, L., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teacher College Record, 111*, 180-213.

Cunningham, M., & Swanson, D. P. (2010). Educational Resilience in African American Adolescents, *The Journal of Negro Education*, 79(4), 473-487.

Diener, E., Lucas, R. E, & Scollon, C. N. (2006). Beyond the hedonic treadmill: revising the adaptation theory of well-being. *American Psychologist, 61*(4), 305–314.

Dodge, R., Daly, A. P., Huyton, J., & Sanders, L. D. (2012). The challenge of defining wellbeing. *International Journal of Wellbeing*, *2*(3), 222-235.

Downey, D. B., & Condron, D. J. (2016). Fifty Years since the Coleman Report: Rethinking the Relationship between Schools and Inequality. *Sociology of Education*, *89*(3), 207-220.

DuMont, K. A., Widom,C., & Czaja, S.J. (2007). Predictors of Resilience in Abused and Neglected Children Grown-Up: The Role of Individual and Neighborhood Characteristics. *Child Abuse and Neglect*, *31*(3), 255–74.

Eccles, J. S., & Roeser, R. (2011). Schools as developmental contexts during adolescence. *Journal of Research on Adolescence*, *21*(1), 225-241.

Gailliot, M. T. (2012). Happiness as Surplus or Freely Available Energy. *Psychology, 3*(9), 702-712.

Galand, B., Hospel, V., & Baudoin, N. (2012). L'infl uence du contexte de la classe sur le harcèlement entre élèves. Dans B. Galand, C. Carra et M. Verhoeven (Eds.), *Prévenir les violences à l'école* (pp. 123-136). Paris, France: Presses universitaires de France.

Hjemdal, O., Vogel, P. A., Solem, S., Hagen, K., & Stiles, T. C. (2011). The relationship between resilience and levels of anxiety, depression, and obsessive–compulsive symptoms in adolescents. *Clinical Psychology Psychotherapy*, *18*(4*)*, 314-321.

Kochenderfer, B. J., & Ladd, G. W. (1996). Peer victimization: Cause or consequence of school maladjustment? *Child Development*, *67*, 1305– 1317.

Masten, A. S. (2007). Resilience in developing systems: Progress and promise as the fourth wave rises. *Development and Psychopathology*, *19*, 921–930.

***OCDE (2016). *PISA 2015 Results. Excellence and Equity in Education.* https://www.oecd.org/ publications/ pisa-2015-results-volume-i-9789264266490-en.html

Orzea, I. E. (2016). *Climatul şcolar şi succesul şcolar* [Scholl climate and school performance]. Babes-Bolyai University, Cluj-Napoca, unpublished doctoral thesis.

Oshio, A., Kaneko, H, Nagamine, S., & Nakaya, M. (2003). Construct Validity of the Adolescent Resilience Scale, *Psychological Reports*, *93,* 1217-1222.

Peterson, C., Ruch, W., Beermann, U., Park, N., & Seligman, M. E. P. (2007). Strengths of character, orientations to happiness, and life satisfaction. *The Journal of Positive Psychology*, *2,* 149-156.

Ronning, J. A., Handegaard, B. H., Sourander, A., & Morch, W. T. (2004). The strengths and difficulties self-report questionnaire as a screening instrument in Norwegian community samples. *European Child and Adolescent Psychiatry*, *13*, 73–82.

Seligman, M. E. P. (2011). *Flourish–a new understanding of happiness and well-being and how to achieve them*. London: Nicholas Brealey Publishing.

Suldo, S. M., Thalji-Raitano, A., Hasemeyer, M., Gelley, C. D., & Hoy, B. (2013). Understanding middle school students' life satisfaction: Does school climate matter? *Applied Research Quality Life*, *8*, 169–182.

Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, *83*(3), 357-385.

Tusaie, K., Puskar, K., & Sereika, S. M. (2007). A predictive and moderating model of psychosocial resilience in adolescents. *Journal of Nursing Scholarship, 39*(1), 54-60.

Yim, O., & Ramdeen, K. T. (2015). Hierarchical cluster analysis: comparison of three linkage measures and application to psychological data. *The Quantitative Methods for Psychology*, *11*(1), 8–21.

Zimmerman, M. A. (2013). Resiliency Theory: A Strengths-Based Approach to Research and Practice for Adolescent Health. *Health Education & Behavior: The Official Publication of the Society for Public Health Education*, *40*(4), 381–383. http://doi.org/10.1177/1090198113493782