

A quantitative cross-sectional study on the effects of background differences and personal character attributes in the formation of dual identities in Egyptian boarding high school students.

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I. Abstract:

Leaving your house as a kid to join a boarding school might significantly affect your future decisions, but in the context of adolescence, this can leave you with double personalities. Dual identity formation remains one of the most complex and challenging experiences to navigate. When moralities and character traits shift, especially as an adolescent student away from your familiar community, it can be challenging to understand oneself. This study aimed to examine the self-identification concept for students in Egyptian boarding schools to clarify this confusion and assist educational institutes in understanding adolescent changes to provide meaningful psychological support. The study was done to compensate for the research gap in identity studies in non-Western contexts, especially in boarding schools that require high intellectual demand and a specific age range, which is in the adolescent stage. The framework mainly used is the Social Identity Theory, as it explains the derivation of self-concepts through in- and out-group categorization. The Self-Concept Differentiation questionnaire and the MacArthur Scale of Subjective Social Status were used as the main methodologies in the study. The findings of the research highlighted a low level of self-concept differentiation; nevertheless, it also highlighted trends in certain characteristics, which suggested the presence of a second self-concept. This study created a comprehensive understanding of the outcomes of an individual leaving their known environment on their identity.

II. Introduction:

Adolescence is crucial for identity formation. According to Development Theory by Erik Erikson [42], an individual seeks to form a stable sense of self by exploring different roles and values, especially in the context of education. Egyptian boarding schools offer rigorous education to outstanding students through high cognitive demand tests for enrollment. These schools are in a few cities, requiring various students with diverse backgrounds to leave their familiar environment and gather on one campus. This process exposes students to different mindsets and cultural variations. Nevertheless, this change may initiate new self-identification among students.

The self-identification sense of the students could be described according to the Social Identity Theory by Tajfel and Turner [2]; the identity of oneself is driven by these processes: social

categorization, social identification, and social comparison. The act of self-categorization within social groups contributes later to favoritism, bias, and stereotyping. In the context of boarding high schools, students' young age and situation of leaving their accustomed place may cause the students to develop a separate identity on campus from the one they often express at home, with different character attributes and morals (dual identities). According to Bronfenbrenner's Ecological Systems Theory, human development ensues through interaction with layers of the environment [26]. This identity change arises from the validation-seeking behavior of either expressing their true withheld self or trying to meet the new social norms.

Research on identity in Egyptian boarding schools remains limited. Previous studies [37] [38] examined the effect of school on sense of self and mental health among United Kingdom boarding school students who spent most of their early life in school, dissimilar to Egyptian boarding schools, where students are enrolled during adolescence. The schools' high selectivity and the adolescent developmental stage make this a critical identity-formation research gap.

This study will investigate quantitatively: (1) the effect of socioeconomic and geographical differences on new self-concept emergence in Egyptian boarding schools, (2) the contribution of personality traits to this change, and (3) the role of environmental adaptation in self-concept differentiation. This research is important for educational institutions to establish psychological support by understanding the transition within Social Identity Theory in a non-Western context. The study will use a survey of 106 participants and three scales: the Self-Concept Differentiation questionnaire, the MacArthur Scale of Subjective Social Status, and the Schwartz PVQ (personal values) [1].

III. Literature review:

III.I. Dual identities and adolescence:

Identity is defined as the sense of self and who a person is, including the internal self-concept and the social role. Furthermore, it is a multidimensional concept, encompassing both personal identity and social identity [1]. Previous studies distinguish the difference between the social and personal identity as: personal identity is the aspect of self that makes the person unique and distinct, including the traits and individual goals, etc, whereas the social identity refers to the part of the self that is derived from membership in social groups, involving the schools and peers, etc [2].

Dual identity is the formation of two identities, which are represented in the ethnic identity and national identity. It is presented when the adolescents have both a strong ethnic and national identity. However, there are other ways for ethnic minority group members to combine both identities [3]. It can be defined as the identity that forms in the home and school. Identity accuracy mode suggests that both identities can be weak, indicating either marginalization or an individual strategy [4] [5].

A significant point that should be considered in the flow of the paper is the dual identity term. The term dual identity refers to two clear identities for the person, while the term double identity is used to express the feeling of division or depression in the person. Also, the researchers use the dual identity term in almost all the research papers. Therefore, the term dual identity is used in this paper as a more precise academic term.

Adolescence is a critical period in human life that contributes to developing the identity of an individual and experiencing new capacities and cultures that enable them to negotiate the depth of their identity [6].

Group identities can be beneficial for people psychologically [7]. The papers frequently focus on adjustment domains in the acculturation literature, involving psychological adjustment, socio-cultural adjustment, and health-related outcomes [8]. Based on prior research done in the US, for instance, meta-analytic evidence from the United States shows that home identity is associated with psychological adjustment and socio-cultural adjustment, with effect sizes ranging from small to medium [9]. School identities, as well, are another source for belonging that can be converted into well-being [10], academic success [11], and more diverse friendship relations [12]. Nevertheless, the advantages of dual identity, the researchers also highlighted that the dual identity causes many disadvantages, such as a stressful and challenging task. To be specific, a normative different groups expect various behaviors from the individual, and it can be a barrier to simulate the two identities, so these two identities clash with each other, which produces behavioral conflicts and uncertainty [13].

Despite prior research that has remarkably examined the dual identity development in various adolescents, less attention has been given to the background differences of these adolescents that shape this process within specific institutional settings.

III.II. Background differences, socioeconomic status, and cultural background

Background differences refer to the structure and social environment in which individuals live, which helps shape their development. This environment shapes the individual's daily experience, access to resources, and the community's expectations. The most significant studied background difference dimensions are socio-economic status (SES), cultural background, family educational level, and urban and rural background. These conditions do not affect independently; they contribute to shaping the personality, behavior, communication skills, and values of individuals.

Socioeconomic status refers to the economic condition of the family, including family income and access to material and social resources [14]. The adolescents who belong to lower SES develop many crucial values for them, such as collectivism, resilience, the family to help each one, and interdependence to not put overload on one individual. Also, they adapt to resource constraints, such as scarcity of opportunities and money [15]. Prior studies illustrated that children with higher SES are exposed to more complex vocabulary and abstract language. Therefore, it helps the children to think, understand, and express themselves in the exams. On the other hand, the children with lower SES deal with context-based or directive instructions. This is because of the difficulty of the lifestyle and the lack of money and funding. Therefore, it makes a difference in academic performance between the children [16]. SES makes a difference in shaping social interaction. Specifically, the adolescents with the higher SES deal with higher self-esteem and confidence, while those with the lower SES employ enhanced strategies to adapt to the community and highlight heightened social sensitivity [17].

Cultural background refers to the norms and beliefs, and traditions shared by each person to understand the community and behave with people [18]. Previous research emphasized the importance of cultural background in affecting the values of individuals, as in the collectivist culture, the individual tends to think about the people around them, respect, and social harmony, while individualist cultures prioritize themselves and their benefit above anything, relying on self-

dependence [19]. Moreover, cultural background affects language and communication styles. With high-context cultures, the speech is indirect, or it is mysterious, so it depends on implicit meanings and non-verbal cues, whereas low-context cultures favor direct and explicit verbal communication [20]. The cultural background directs the roles of each one in society, such as how to express our feelings and how to deal with the father and teacher, and so on [21].

Family education level signifies the academic level of the parents. In other words, it represents the limit of parental experience and, overall, influences the development of the children [22]. Research indicates that well-educated parents are more likely to learn their children critical thinking and pay good attention to the education level, whereas those with less-educated parents are more likely to rely on practical skills and carry the responsibility [23]. It affects the language as well, as the educated parents use discussion language and give reasons for doing things, which helps in improving the understanding of their children [24]. Additionally, the children in a family with highly educated parents tend to feel more comfortable with their situation and express their opinions freely [25].

Urban and rural backgrounds involve a difference in population density, and it affects the accessibility to the services, shape of the community, and lifestyle [26]. Previous studies suggest that urban environments often improve the flexibility of different views and thinking about all aspects and diversity, whereas rural environments encourage the importance of tradition and cohesion of the community [27]. The research indicates that in an urban environment, individuals are exposed to many accents and languages, in contrast to a rural environment, where individuals use the same linguistic norms [28]. In terms of social interaction, individuals from an urban background may develop more flexible social identities. On the other hand, people from a rural background rely on stable relations, long-term social relations.

In the period of adolescence, adolescents begin to get aware of themselves in the community, particularly in differences of appearance, academic achievement, family, and social status. According to Festinger's social comparison theory, adolescents evaluate their abilities and worth by comparing themselves to their peers. When the identity formation is in its prime, this process is remarkably strong in this stage [29]. Empirical research shows that adolescents engage in upward and downward comparison, which may significantly affect their well-being, emotions, and self-evaluation [30].

The acceptance by the peers plays a crucial role in evaluating the adolescents to themselves, specifically, the acceptance reassures the sense of belonging, validation, and emotional security, while the rejection can threaten the development of self-conception. Prior research illustrates that adolescents can change their behavior, language, and self-presentation to match the environment and to be accepted by their peers [31]. Therefore, it shows that adolescents can be changeable by changing the conditions that surround them.

The comparisons that adolescents made to evaluate themselves were based on class and cultural differences. It gives priority to adolescents who come from a class with cultural capital because the institution often aligns with this. Therefore, it improves self-esteem and self-evaluation for this layer [32]. Although the other who are from low-class cultural capital, the problem is not in themselves, but the problem in the organization and rules and the expectations, which are not suitable for each one. The difference in the students' backgrounds and requirements for the organization causes certain groups to be systematically wronged [17]. Furthermore, social identity theory further elaborates how privileged adolescents may produce enhanced self-esteem through in-group favoritism, a process that improves feelings of superiority while simultaneously reproducing social hierarchies and exclusionary dynamics within peer groups [2].

Longitudinal studies demonstrate that socio-economic status, cultural belonging, and perceived social rank are significant factors in self-esteem and evaluating the self in adolescents [33] [30]. Thus, self-esteem is not just a personal trait; it reflects the position of the individual in the community and social system around them.

Previous studies suggest that adolescents can maintain many identities in themselves to adapt to the context and situation. Particularly, they can have a family identity to adapt to the traditions and cultural values, and they have another identity for school identity to be accepted and achieve academic success. This process is described as identity compartmentalization, in which different aspects of the personality are active with simulation of the context and situation [34]. Other studies suggest that adolescents can change their identity in dynamic environments, which is called identity switching [35]. Also, frequent switching in identity represents the anxiety for the adolescents, or they come from minority or marginalized backgrounds.

Research indicates that exposing adolescents to conflicting social norms or marginalization causes an increase the stress and anxiety, and identity confusion. It has been remarkable when the individual tries to balance between two identities, one for family and one for school, which puts too much psychological overload on the adolescent [36] [35]. Conversely, other research suggests that successfully managing multiple identities can foster resilience and adaptability and greater identity complexity. Also, it enables adolescents to explore diverse social contexts and maintain their well-being [34] [1].

These effects can become significantly shown in institutional settings where adolescents from various backgrounds are placed in close interaction, such as boarding schools.

III.III. Boarding schools

Boarding schools are institutions where the students collect, live, learn, participate in the same activities, and are within the same environment for a long period [37]. The students can be of different types, including traditional, religious, and co-educational schools, each with distinct social and cultural norms that shape students' daily experiences. Previous research shows that the immersive environment of boarding school provides a unique context for students, as the students continuously interact with their peers. Consequently, the students play various roles, and balance between themselves, rules, and social relationships with peers, also, the development of identity formation [37] [38].

Boarding schools clearly affect the psychological aspect of the students. Prior research shows that students can be exposed to stress and anxiety from living away from their families, as well they should develop strategies to face their challenges so they can adapt to the new environment [37] [38]. At the same time, research indicates that boarding schools can foster independence, flexibility, resilience, and a stronger self-concept through continuous living with the same people and the existence of a clear system and responsibilities [37]. However, adolescents may feel a conflict in identity formation to balance the values of home and family with the values and identity of school. Therefore, it can cause psychological anxiety in adolescents, but also, it also helps adolescents to enhance a complex identity [34] [36].

Furthermore, boarding schools have an extraordinary effect on adolescents in social impacts. Peer relationships play a central role in defining and directing the behavior of adolescents, helping them in identity formation [31]. Previous studies suggest that adolescents at boarding schools adapt to in-group and out-group dynamics, which affect the emotions of belonging, social status within the school community [2]. Accumulating evidence indicates that

dealing with authority at school affects the extent of students' adherence to school rules and the method of socialization within the school environment [37].

The psychological and social impacts are influenced by various mediating factors. Research to date suggests that the duration of stay at school and the aging of individuals affect how quickly they adapt to the circumstances at school [37]. In addition, family support was involved in emotional or practical help in reducing the stress on the individual and raising the sense of well-being [38]. Studies have pointed to individual personality differences, introverted personality or extraverted personality, playing a crucial role in making friends and coping the stress strategies, whereas the ability to adapt to a new cultural environment, especially multiple identities and social integration [39] [35].

Findings are different in defining the outcomes of the impacts of boarding schools on identity formation. The literature has increasingly emphasized that the positive side is that living in a structured residential environment fosters self-reliance, adaptability, and teamwork skills through shared responsibilities and continuous peer interaction [37] [38]. On the other hand, previous empirical studies highlight that students may suffer from homesickness, anxiety, and stress, particularly during the initial adjustment period, whereas others may face identity confusion or social exclusion. This is because of not negotiating between the values of home and the values of school [36] [34].

The psychological and social effects described above suggest that boarding schools, as semi-closed environments, may cause identity conflicts, especially for students from several backgrounds.

III.IV. The Egyptian context

The Egyptian cultural context is characterized by strong orientation and cohesion between the individual, who also respects authority, particularly at schools and homes. Prior empirical work demonstrates that these cultural features shape self-definition by highlighting relational identity and social roles instead of the attributes of everyone, boosting a sense of belonging rooted in family and community [21] [19]. Other multiple studies have documented that these cultures can cause internal conflict in adolescents because they are required to obey and respect authority, especially within structured institutional settings [26].

The education system in Egypt is defined by hierarchical structures, a significant focus on discipline, and stress on high academic levels, with authority largely controlled by institutions, instead of promoting student autonomy [21] [40]. These aspects form the daily experience for the students and the socializing process. Despite the increasing significance of residential and boarding-based educational models, there remains limited empirical research investigating boarding schools or residential education within the Egyptian context, which creates a gap in understanding their psychological and social impacts on adolescents [41].

IV. Methods:

IV.I. Research design

To examine self-concept, a cross-sectional quantitative research design was conducted to transform dual identity research into measurable functions that facilitate the analysis of the results. The study relied on volunteer responses to ensure unlimited contributions, enhancing the reliability of the results.

IV.II. Participants

The sample of the study targeted two main domains: regular Egyptian secondary schools (control) and Egyptian boarding schools (variable), which are STEM high schools, Ain Shams Advanced School, El Dabaa Nuclear School, and El Manara School. The participants were categorized into groups according to school type, age, and gender.

IV.III. Data collection

The responses were collected through a Google Forms survey in the Arabic language to ease the understanding of the questions for those who struggle in English. The survey was sent to participants via WhatsApp groups, collecting Egyptian boarding school students and their interests, to allow volunteers to respond remotely to ease participation.

IV.IV. Ethical considerations

For the ethics of the study, by taking part in this survey, the participants confirmed their consent for the information provided to be used for academic research purposes. They also agree that the collected data may be shared publicly alongside the research paper to support further development and external studies on this topic. Their personal data won't be shared, as the survey is completely anonymous.

IV.V. Instruments

To comprehensively examine self-concept and its differentiation, three scales have been utilized: the Self-Concept Differentiation questionnaire, the MacArthur Scale of Subjective Social Status, and personal values (Schwartz PVQ). The survey was distributed into sections to measure demographics and each scale individually. The Self-concept Differentiation questionnaires consisted of Likert scale question types from 1 to 7, where 1 represented "Doesn't describe me at all" and 7 represented "Fully describes me" in two scenarios, one at the familiar environment of the individual (for example, at the city of the individual) and one at the school campus. The questions targeted different character traits in these scenarios: security, responsibility, creativity, leadership, universalism, benevolence, achievement, self-direction, sociability, emotional stability, and organization. The MacArthur Scale of Subjective Social Status was measured through a Likert-scale-styled question from 1 to 10, given that students' choices are based on where they see themselves in the community, where 1 represented the people with the worst situation in society (worst education, financial status, and reputation) and 10 represented people with the best situation in society. The personal values (Schwartz PVQ) had 2 sections of questions. Section 1, which measured character attributes, had Likert-scale questions from 1 to 7, where 1 represented "Don't agree at all" and 7 represented "Totally agree" in the following context: (1) I consider myself an organized person. (2) I consider myself a calm and emotionally balanced person. (3) I consider myself a social person and enjoy interacting with people. (4) I like thinking creatively and coming up with new ideas. (5) I treat others with friendliness and cooperation. (6) I feel anxious or stressed in many situations. (7) I enjoy social gatherings and activities. (8) I am curious about learning and trying new things. (9) I adhere to rules and traditions. (10) I tend to take leadership and initiative

in situations. The second section that measured personal values had a Likert-scale question from 1 to 6, where one represented (Doesn't resemble at all) and 6 represented (Resembles me a lot) in the following contexts: (1) He must be rich and own valuable things. (2) Success is important to him; he wants others to admire me because I have achieved things. (3) It is important for him to enjoy life. (4) He loves surprises and new experiences. (5) He thinks about new ideas and likes to decide for himself. (6) He believes that all people should be treated with respect and equality. (7) He cares about helping those around him. (8) He respects religious and family traditions. (9) He prefers to act properly and avoid problems. (10) He felt the importance of living in a safe and stable place. (11) He must be independent of the influence of others. (12) He must have a stable financial status. (13) He cares about protecting nature and all human beings. (14) He values strong relationships with those close to him. (15) He seeks recognition for his achievements and talents. (16) He believes that order and discipline are essential for society. (17) He loves to try new and unconventional things. (18) He honors modesty and hates bragging. (19) He believes it is important to excel over others. (20) He helps others without expecting anything in return. (21) He cares that everyone gets equal opportunities.

IV.VI. Data analysis

In analyzing the data, the descriptive statistics approach was used, measuring the mean, n , and Standard Deviation (SD) of all variables. Reliability measures of scales were conducted in the form of Cronbach's α . The Pearson Correlation Matrix utilized Self-concept Differentiation (SCD) traits analysis. Group Comparison (One-way ANOVA) for SCD was done by School Type. Multiple regressions were involved in predicting SCD.

The analysis of data was conducted using IBM SPSS Statistics and Microsoft Excel for data preparation.

V. Results:

The total population for this study consisted of 106 participants. **Table 1** below highlights the descriptive statistics of the participants in terms of age, gender, and type of school. The average age of the participants stood at 17.00 years, with a standard deviation of 1.45 years. Among the participants, 62 were female (58.5%), and 44 were male (41.5%). A majority of them were from STEM high schools, followed by the control group, which comprised regular secondary schools. Fewer numbers were from Ain Shams Advanced Schools, El Dabaa Nuclear Schools, and El Manara Schools.

Gender	n	%
Female	62.00	58.49
Male	44.00	41.51
School Type	n	%
STEM High Schools	78.00	73.58
Regular Secondary Schools (Control)	22.00	20.75
Ain Shams Advanced	4.00	3.77
El Dabaa Nuclear	1.00	0.94

El Manara	1.00	0.94
Variable	Statistic	Value
Age	Mean (SD)	17.00 (1.45)

Table 1: participants characteristics

The descriptive statistics for SCD, personality dimensions, and Schwartz's values are presented in **Table 2**. A mean score of SCD with a standard deviation of 0.04 (SD = 0.73) indicated a low level of self-concept differentiation. Scores for dimensions of both personality and Schwartz's values were moderate to high.

N	Mean	SD
106.00	-0.04	0.73
106.00	3.89	1.73
106.00	3.70	1.63
106.00	3.86	1.75
106.00	3.99	1.69
106.00	4.18	1.62
106.00	3.77	1.40
106.00	3.32	1.41
106.00	3.49	1.54
106.00	3.38	1.41
106.00	3.41	1.44

Table 2: Descriptive Statistics for Main Variables

Internal Consistency Reliability for each scale is presented in **Table 3**. The majority of the personality scales have a good level of reliability ($\alpha = 0.73$ - 0.90). However, lower levels of reliability were obtained in Self-Direction ($\alpha = 0.35$) and in Achievement ($\alpha = 0.57$).

Scale	Cronbach α
Organization	0.73
Emotional Stability	0.90
Sociability	0.86
Leadership	0.90
Creativity	0.83
Self-Direction	0.35
Achievement	0.57
Benevolence	0.76
Universalism	0.46
Security	0.52

Table 3: Reliability of Scales (Cronbach's α)

Schwartz's value scales have a Correlation analysis results **Table 4** showed weak links between SCD and both dimensions of personality and preferences, with no correlations being very strong.

SC D	Organization	Emotional Stability	Sociabil ity	Leader ship	Creati vity	Self- Directio n	Achieve ment	Benevolence	Universalis m	Security
1.0 0	-0.06	-0.04	0.05	0.09	0.16	0.20	-0.02	0.01	0.04	0.02
- 0.0 6	1.00	0.17	0.11	0.26	0.02	-0.11	-0.08	0.03	0.06	0.04
- 0.0 4	0.17	1.00	-0.05	0.15	-0.01	-0.04	0.06	-0.03	0.01	0.00
0.0 5	0.11	-0.05	1.00	-0.02	0.03	0.01	-0.09	0.07	0.05	-0.02
0.0 9	0.26	0.15	-0.02	1.00	-0.05	0.06	-0.12	-0.03	-0.03	0.26
0.1 6	0.02	-0.01	0.03	-0.05	1.00	0.01	-0.02	-0.02	0.27	-0.10
0.2 0	-0.11	-0.04	0.01	0.06	0.01	1.00	0.04	-0.04	0.11	0.08
- 0.0 2	-0.08	0.06	-0.09	-0.12	-0.02	0.04	1.00	-0.27	-0.09	-0.02
0.0 1	0.03	-0.03	0.07	-0.03	-0.02	-0.04	-0.27	1.00	-0.04	-0.12
0.0 4	0.06	0.01	0.05	-0.03	0.27	0.11	-0.09	-0.04	1.00	-0.10
0.0 2	0.04	0.00	-0.02	0.26	-0.10	0.08	-0.02	-0.12	-0.10	1.00

Table 4: Pearson Correlation Matrix

One-way ANOVA tested for differences in SCD by school type **Table 5**. No differences were found to be significant, $F(4, 101) = 0.64$, $p = 0.638$.

Statistic	Value
F-statistic	0.64
P-value	0.638

Table 5 . Group Comparison (ANOVA) for SCD by School Type

A multiple regression analysis predicting SCD on dimensions of personality **Table 6** indicated that none of the predictor variables were statistically significant. The model accounted for 8.4% of the variance in SCD ($R^2 = 0.084$, Adjusted $R^2 = -0.013$).

Predictor	Coefficient	P-value
Intercept	-0.794	0.153
Organization	-0.029	0.514
Emotional Stability	-0.015	0.740
Sociability	0.023	0.582
Leadership	0.049	0.296

Creativity	0.079	0.092
Self-Direction	0.097	0.067
Achievement	-0.006	0.905
Benevolence	0.006	0.909
Universalism	-0.013	0.811
Security	-0.002	0.966

Table 6: Multiple Regression Analysis Predicting SCD

R-squared: 0.084

Adjusted R-squared: -0.013

VI. Discussion:

VI.I. Discussion

The current research aimed to examine self-concept differentiation in students in boarding schools in Egypt relative to students in common secondary schools in terms of dual self-concept formation in adolescence. The results show a low level of self-concept differentiation in both schools ($M=-0.04$, $SD=0.73$); however, analysis of self-concept dimensions shows distinct personality and value trends in boarding students, which are a consequence of unique social and environmental experiences contributing to dual self-concepts.

The findings from descriptive statistics indicated moderate to high strengths in traits such as organization, creativity, and sociability, together with high scores in traits of benevolence and security. Findings from these statistics indicate that students in boarding schools interact with varying social situations, juggling their personal tendencies with social demands. They fit nicely into Tajfel and Turner's work based on Social Identity Theory, in which adolescents undertake social comparisons to define their social identities in novel social settings with fellow peers. Students in boarding schools, being out of their social setting, are most likely juggling two roles, one in their family social setting and another in their boarding school setup, thus establishing a 'double identity.'

Reliability analysis indicated that most of the traits measured by these scales were reliable ($\alpha = 0.73-0.90$), but a lower level of reliability in Self-Direction and Achievement dimensions may represent an inconsistency in these students' views about autonomy and goal attainment, which can represent an inconsistency in their identity in both their homes and schools. A lower level of reliability in Self-Direction and Dimensions of Achievement may symbolize an adjustment in these students in regard to traits and views of self to fit into their boarding life, in accordance with Bronfenbrenner's Ecological Systems Theory.

The correlation results indicated a weak association of SCD with dimensions of personality or values. This may be because self-concept differentiation is less affected by personal traits and instead by situational factors such as the type of school, social interactions, and cultural beliefs. However, an ANOVA analysis indicated a non-significant difference in self-concept differentiation among different types of schools. Although this indicated a non-significant impact of boarding schools on a broad SCD level, in contrast with a normal school, a moderate level of SCD and individual traits suggest an impression of a unique self-concept among boarding students. In other words, although a dual sense of identity lacks a strong presence in a collective

sense of SCD scores, each student must cope with her/his niche roles and self-perception based on context.

The multiple regression did not reveal any significant predictor variables for SCD among either the dimensions of personality or Schwartz's values, which strongly supports the contention that, rather than being facilitated straightforwardly through individual variables, dual identity formation is a function of a series of nuanced social and environmental interplay effects. In other words, it is the nature of the boarding school experience per se, which involves separation from family and socialization with some different social strata in a controlled environment, which lends itself to dual identity formation. In summary, these results suggest a very nuanced, contextually bound self-definition among boarding school students. Although SCD total scores do not appear to be very different from those of non-boarding school students, individual elements of both personality and situational adaptation contribute to a meaningful dual self-definition in different contexts. Perhaps a qualitative study or a longitudinal study can more effectively examine this dynamic self-definition process.

VI.II. Limitations

To ensure the credibility of the study and to allow the continuity of the research on dual identity in the same context, limitations of the study had to be acknowledged. Limitations include the insufficient number of participants at 106; given the broad nature of the school, this can produce an error in the results. Number bias is also a barrier, as the majority of participants were from STEM high schools, producing a bias in measurements according to school settings due to inequality of data collection. The third limitation is the dependency on volunteer responses, which can initiate bias in them. The fourth limitation is the low significance of the data, for example, the self-direction trait reliability value was 0.35 (Cronbach α).

VII. Conclusion:

To sum up, the research explored the self-identification concept for adolescents in Egyptian boarding schools compared to students in conventional secondary schools, concerning the potential role of a closed environment in shaping the identity of adolescents, to elaborate on this confusion and assist educational institutes in highlighting the significance of context in understanding identity conflict, psychological, and social adjustment. Taken together, the findings indicate that the level of self-concept differentiation does not differ significantly compared to conventional secondary school, so it is not expressed through broad identity fragmentation. However, Descriptive statistics detected moderate to high levels in traits such as organization, creativity, sociability, benevolence, and security, which could indicate that these adolescents interact with diverse social situations, balancing personal tendencies with institutional and peer expectations. These traits represent overall personality characteristics rather than evidence of identity differentiation. Despite the description observed of context-related differences between the adolescents, these do not provide crucial statistical evidence for clear and consistent dual self-identification as measured by self-concept differentiation. These factors may play a role in self-identification and should be represented in future research. Furthermore, the results suggest that self-concept differentiation was not remarkably associated with personal values and traits. Therefore, this highlights the prerequisite for considering the context in future research. Also, the findings illustrate the need for more studies about identity formation in adolescents, especially in Egyptian boarding schools. Future research could conduct longitudinal or qualitative studies to better understand the dual identity formation in the dynamic nature of boarding schools, which

would inform educational practices and policies that support adolescents' psychological adjustment and well-being in residential learning settings.

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