Self-Regulation Association with Mental Health: A Study of Normal and Special Needs Students

Hafiz Farhan Gohar[1] & Anam Zahra[2]

Abstract

This study examined the relationship between self-regulation, psychosocial adjustment, and mental health among university students with special needs. Utilizing a quantitative research design, the study involved a total of 120 participants, comprising 60 students with special needs and 60 typically developing (normal) students, selected through convenience sampling. Data were collected using a structured questionnaire from two institutions: Ghazi University, Dera Ghazi Khan (normal students) and the University of Management and Technology (UMT), Lahore (special needs students). Statistical analysis was conducted using SPSS version 21. The findings revealed a significant positive relationship between self-regulation and psychosocial adjustment difficulties. While no significant correlation was found between self-regulation and psychosocial adjustment components (emotional, social, and psychological wellbeing) among normal students, a significant and positive correlation was observed among students with special needs. Furthermore, self-regulation emerged as a significant positive predictor of mental health among the special needs group. The study concludes that self-regulation is closely linked to psychological wellbeing in students with special needs, highlighting the importance of fostering self-regulatory capacities to enhance mental health outcomes in this population.

Introduction

Self-regulation is a critical aspect of learning that has garnered increasing attention in educational and psychological research. It refers to an individual's ability to plan, monitor, and evaluate their own behavior and cognitive processes, particularly in goal-directed activities. In recent years, self-regulation has emerged as a key factor in mental health and decision-making, with research emphasizing its importance in enabling individuals to adapt effectively within social contexts (Brophy-Herb et al., 2018). A well-developed capacity for self-regulation is often associated with sound mental well-being and the ability to make rational, future-oriented decisions. Conversely, deficits in self-regulation are frequently linked to poor mental health outcomes and maladaptive behaviors.

Decision-making, especially in youth, involves navigating an overwhelming number of choices that can significantly shape one's social and emotional development. The period between the ages of 10 and 25 is particularly sensitive, as it is marked by psychological transitions that can have long-lasting impacts on an individual's mental health and life trajectory. Within diverse societies, individuals exhibit a range of developmental needs from typical to special and those with special needs often encounter unique challenges in managing self-regulation within educational settings

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[1] The author is working as a School Health & Nutrition Supervisor (BS-17 Scale) at District Health Authority Kasur, Punjab, Pakistan. He can be reach at Gmail: fomi81@gmail.com

[2] The author is visiting Lecture Ghazi University, Dera Ghazi Khan and done M. Phill in Sociology from University of Management and Technology Lahore, Pakistan. She can be reach at Gmail: anumzahra572@gmail.com

(Choi & Park, 2018). These challenges, if unaddressed, may exacerbate mental health issues and hinder their academic and personal growth.

This study focuses specifically on the interplay between self-regulation and mental health among students with special needs. It explores how their ability to self-regulate influences their academic performance and psychological stability. Self-regulated learning encompasses three interrelated phases: planning, execution, and self-reflection. These phases involve not only cognitive processes but also motivational and emotional components, such as self-efficacy, goal orientation, and performance-related emotions (Vassou, 2017). For students with special needs, the ability to engage in metacognitive activities, such as evaluating one's performance against set standards, attributing success or failure appropriately, and managing academic-related emotions—is crucial.

University years are particularly formative, as students are expected to develop greater autonomy and responsibility. During this period, the experiences they undergo play a vital role in shaping their personal and professional identities. When mental health is nurtured and self-regulation strategies are effectively employed, students are more likely to achieve academic success and exhibit resilience in the face of future challenges. Ultimately, self-regulation functions as a protective mechanism that helps individuals navigate complex environments and avoid potential pitfalls (Rodgers & Tennison, 2009).

Study Rationale

The study has been conducted to explore the relations of self-regulation and mental health (psychosocial wellbeing, emotional wellbeing, social wellbeing). The sample of the study was 60 normal students, and 60 special needs students and total sample size was 120 students. Different studies have checked the family environment with self-regulation and mental health of the students collectively. Such as, students encounter the high demands of university which clashes with their individual diversities and suppress their inborn capabilities (Rodgers & Tennison, 2009). Likely the self-regulation negatively affects the students' performance during educational years. The increase in stressors affects the mental health (Bramness, Fixdal, & Vaglum, 1991). Disability, of any type, causes great stress and depression due to a lot of different factors. In the Pakistani context, Aslam and Ali (2017) find out the models of balanced for self-regulation instruction as an intermediary for students cognitive ability and human capital. Furthermore, Mushtaq, Lochman, Tariq, and Sabih (2017) in extra cross-sectional and experience testing ponders inspecting psycho and social adjustment problem of self-regulation between and inside people. These studies indicated that school children are involved in relations to self-regulation and mental health but other side university students are also fall in such type circumstances. So, the purpose of this research is to find the effect of self-regulation on mental health and how these factors influence the special needs student in university. In other side situation the difference between level of self-regulation and mental health among normal and special needs students. In a nut shell, it is justifiable to study these all circumstances of students in university.

Study Objectives

1) To investigate self-regulation and mental health (psychosocial wellbeing, emotional wellbeing, social wellbeing).
2) To predict of self-regulation on the mental health.
3) To determine the role of demographic variable (age, gender, family system, types of disability, reason of disability) on mental health in special students

Literature Review

Gul and Zafar (2018) claimed that both psycho and socio adjustment interest are vital roads for prosperity in society. The main objective of the study was to psycho and social adjustment interest

for person self-regulation. Sample of the study was 178. The finding of the study was that, that psycho was positive predictor for social adjustment and self-regulation is helping to increase psycho-socio adjustment among university students. It was concluded that various time spans on self-regulation increase psycho-socio adjustment in university students.

In the Pakistani context, Aftab, Klibert, Holtzman, Qadeer, and Aftab (2017) have investigated secondary school review composing tests, and records of administration and extracurricular exercises to decide an understudy's potential for accomplishment. Inside the setting of the purpose of the study was that skilled understudies are depicted as people revealing abnormal amounts of accomplishment in every one of these spaces, taking note of that the level of accomplishment used to decide talent would change contingent upon the nearby conditions of every undergrad foundation. Respondent of the study were 122. The study understudies depicted people revealing abnormal amounts of accomplishment in every one of these spaces, taking note of that the level of accomplishment.

Mushtaq et al. (2017) developed cross-sectional and experience testing ponders inspecting psycho and social adjustment problem of self-regulation between and inside people. it was testing ponders inspecting psycho and social adjustment problem of self-regulation between and inside people have good. The sample was 188. It was found self-regulation interests to relate more emphatically to constructive effect and cheerfulness, while socio-interests related more to significance. It was concluded; that exploratory intercession thinks about has been directed in which members were arbitrarily continuing self-regulation among students. Those in the self-regulation exercises detailed all the more prosperity benefits promptly following the intercession. These are condition announced more noteworthy prosperity in a subsequent evaluation.

Aslam and Ali (2017) models balanced for self-regulation instruction as an intermediary for student's cognitive ability and human capital. Likewise, the main objective was balancing student mental trouble, which is especially common among university, and is additionally firmly identified with youngster self-regulation and externalizing and disguising issues. It was found that self-regulation is related to psycho-socio adjustment in home association. It is concluded that solitary students have low self-regulation to psycho-socio adjustment in university students. The student-level covariates with sex and ethnicity because his self-regulation is going to low. Girls are at lower danger of social issues than young men and demonstrate favorable position in self-control and verbal subjective capacity.

Müller and Seufert (2018) revealed higher by and large self-regulation. Results demonstrate that while self-regulation discernments did not contrast between gatherings in the main psycho adjustment, self-regulation recognitions were higher among students. It starts to advise that self-strategy is subjective and perceptual procedures engaged with social adjustment in human beings. It additionally serves to reveal the connection between self-regulation and social adjustment in comparable social systems. The investigation reaches its inference from the parent's perspectives and points of view. It additionally weights on the parent's association as the changing operators of their disabled youngsters. Reference to the social issues of the influenced children, the guardians revealed their youngster's conduct as forceful and disappointed. Besides, the forceful conduct frequently influenced children are suffering in learning as well. Kauffman, Hallahan, and Pullen (2017) Kauffman, Hallahan, and Pullen (2017) Kauffman, Hallahan, and Pullen (2017) Kauffman, Hallahan, and Pullen (2017) Kauffman, Hallahan, and Pullen (2017) mentioned that self-regulation in special education was very low due to their own following rules in daily life as compared to self-regulation of regular children. In a nut shell, it was concluded that self-regulation of special education is possible but social adjustment is not related with self-regulation. The finding of the study was that, that psycho was positive predictor for social adjustment and self-regulation is helping to increase psycho-socio adjustment among university students. It was concluded that various time spans on self-regulation increase psycho-socio adjustment in university students. Mushtaq et al. (2017) Mushtaq et al. (2017) Mushtaq et al. (2017) Mushtaq et al. (2017) Mushtaq et al. (2017) concluded; that exploratory intercession thinks about has been directed in which members were arbitrarily continuing

self-regulation among students. Those in the self-regulation exercises detailed all the more prosperity benefits promptly following the intercession. These are condition announced more noteworthy prosperity in a subsequent evaluation.

Research Hypotheses

1. There is likely to be a relation between self-regulation and mental health in normal and special students.
2. Self-regulation will predict mental health in normal students and special needs.
3. There is likely to be a relationship between demographic (age, gender, family system, types of disability, reason of disability) on mental health.
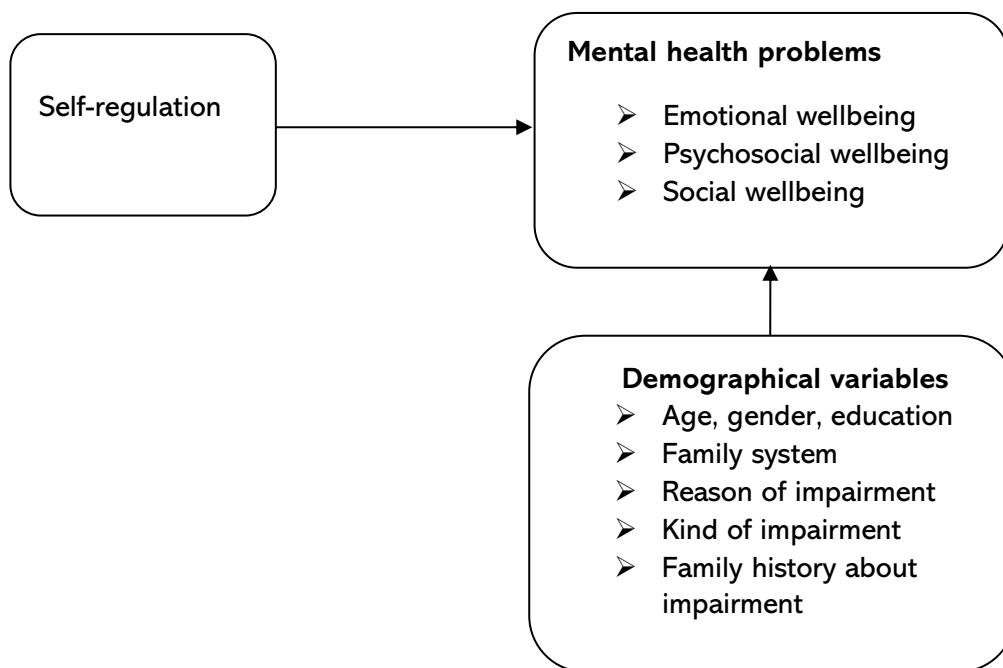
Figure 1: Hypothetical Model

Research Methodology

The current research was aimed at investigating the relationship between self-regulation and mental health problems among university students. The correlational cross-sectional research design was used. The study has collected data from UMT special needs university students and normal students from the Ghazi University, Dera Ghazi Khan. Similarly normal students were also compared with special needs students. A sample of 120 (special need students = 60, normal students = 60) was selected. A probability of a convenient sampling technique was used in the study. Sample was taken as an adults' university student age range of 18 to 25 (M=20.97, SD=1.804) of normal students; (M=22.03, SD=2.762) of special need students. The universe of the study was Ghazi University, Dera Ghazi Khan and UMT students.

Inclusion Criteria

Students who survive with special needs were included. Students from the age range of 18-25 were included. The second criterion was where normal university students were included.

Exclusion Criteria

The participant which did not fall under the above criteria was excluded.

Assessment Protocol

Three questionnaires along with a demographic information sheet and informed consent were used Urdu version. Such as, Self-regulation scale (Kate B. Carey,2004), Mental health problems scale (Corey L. Keyes, 2008), demographical information sheet and informed consent.

Self-regulation questionnaire (SRQ) scale: Self-regulation questionnaire developed by Kate B. Carey and translated in Urdu version by Dr Farah Malik Scale consists of 31 items to measure student self-regulation and responsive regarding them. There is 5-point Likert's scale 1=strongly disagree, 2= disagree, 3=neither agree nor disagree, 4=agree, 5= strongly agree. Cronbach's alpha of self-regulation for normal students α=.87 and special students α=.87 mean and standard deviation of Normal students is 100.10(17.64) and students of special needs 97.35(18.39).

Mental health problems (MHC-SF) scale: The scale was developed by Corey L. Keyes. The MHC-SF is a scale measuring emotional wellbeing, psychosocial wellbeing and social wellbeing. The scale is relatively short, with 14 items with 3 subscales (psychosocial wellbeing, emotional wellbeing, social wellbeing) to measure student self-regulation and responsive regarding their emotional well-being comprised of 3 items including 1,2 and 3, psychological well-being comprised of 6 items including 9,10,11,12,13 and social well-being comprised of 5 items including 4,5,6,7, and. There is 6-point Likert's scale 0= never, 1= once or Twice, 2= about once a week, 3= about 2 or 3 times a week, 4= almost every day, 5= every day. Cronbach's alpha and mean/standard deviation of emotional wellbeing for normal students (α=.87), M(SD)=9.72(3.71), and special students (α=.87), M(SD)=7.42(3.44); alpha value for normal students in social wellbeing (α=.49), M(SD)=12.78(2.63), and special students (α=.51), M(SD)=8.95(2.77); alpha value for normal students in psychosocial wellbeing (α=.76), M(SD)=10.67(5.54), and special students (α=.66), M(SD)=10.13(3.57).

Demographical Information

Self-developed questionnaire was used to measure different demographic information of the participant such as age, gender, education, family system, reason of impairment and kind of impairment. All the demographic information was given in the below Table 1.

Table 1
Descriptive statistics of Demographic Characteristics of normal and special needs students (N=120)

Variable		Normal Students n=60		Special Need Students n=60	
		f (%)	M (SD)	f (%)	M (SD)
Years	–	–	20.97 (1.80)	–	22.03 (2.76)
CGPA	–	–	2.81 (.869)	–	3.08 (.372)
Department	–	–	–	–	–
No. of siblings	–	30 (50)	_	30 (50)	_
Birth Order	–	30 (50)	_	30 (50)	_
Relationship with disabled person	–	–	–	–	–
Gender	Male	30 (50)	–	34 (56.7)	–
	Female	30 (50)	–	26 (43.3)	–
Family structure	Joint	34 (56.7)	–	39 (65)	–
	Neutral	26 (43.3)	–	21 (35)	–
Parents alive	Yes	57 (95)	–	43 (71.7)	–
	No	3 (5)	–	17 (28.3)	–
Types of disability	Normal	60 (100)	–	–	–

	Deaf	–	–	25 (41.7)	–
	Dumb	–	–	28 (46.7)	–
	Both	–	–	7 (11.7)	–
Reason of disability	Normal	60 (100)	–	–	–
	By birth	–	–	48 (80)	–
	Accidental	–	–	12 (20)	–
Pre-disability	Normal	60 (100)	–	–	–
	Yes	–	–	2 (3.3)	–
	No	–	–	58 (96.7)	–

Procedure

The departmental permission was taken for research which includes permission letters for the data collection for the selected university and institute as well as department was briefed about the aim and objectives of the research. Demographic sheet that contains some personal information, for example age, gender, and education etc. Students filling this personal sheet. Questionnaires having measures of family assessment, self-regulation, and mental health problems were distributed. After collecting the data, data analysis was applied to find the result of the study by using statistical packages for social sciences (SPSS Version 21).

Ethical Consideration

- Permission was taken from Ghazi University, Dera Ghazi Khan and UMT for data collection.
- Informed consent was taken from participant and all participants have right to participate and withdrawal.
- The information was collected from participants should be kept confidential.
- The result was reported accurately.

Data Analysis

The collected data was empirical and was used in-depth semi-structured interviews from the participants in the study. The results were analyzed in three key steps. The first step processed was to check the reliability of questionnaires on local students i.e. special and normal. The second step was to run Pearson product moment correlation; ran separately on special and normal students, to find out the relationship between self-regulation and mental health scale i.e. emotional wellbeing, social wellbeing and psychological wellbeing. The third step was to run hierarchical regression analysis to predict the effect of self-regulation on mental health scale i.e. emotional wellbeing, social wellbeing and psychological wellbeing. Following are the results of the tests run on the data entered.

Table 2
Cronbach Alpha and Descriptive Statistics of Self-regulation and Mental Health) (N=120)

Variables	K	Range			α
		M(SD)	Actual	Potential	
Self-regulation	31	98.72 (17.99)	64 – 127	31 – 155	.87
Emotional Wellbeing	3	8.56 (3.75)	0 – 15	0– 15	
					.87
Social Wellbeing	5	9.71 (3.13)	4 – 15	0 – 25	.64

| Psychological Wellbeing | 6 | 10.40 (4.65) | 2 – 18 | 0 – 30 | .72 |

Note: k= number of items

In the above table alpha reliability of self-regulation and psychosocial adjustment scale i.e. emotional and psychological wellbeing is highly significant. Social wellbeing is showing low reliability in comparison; however, it is significant as per reliability rules. Following is the correlation table of normal and special students from top right is of normal students and from bottom left is of special students (See Table 2).

Table 3

Correlation of Self-Regulation with Mental Health (Normal = 60, Special = 60)

S. No	Variables	1	2	3	4
1	Self-regulation	–	.10	.24	-.14
2	Emotional Wellbeing	.13	–	.55***	.15
3	Social Wellbeing	.25	.41**	–	.19
4	Psychological Wellbeing	.49***	.03	.26*	–

*p< .05, **p < .01, ***p< .001

The Pearson product moment correlation of normal students revealed that there was no significant correlation found between self-regulation and psychosocial adjustment scale i.e. emotional wellbeing, social wellbeing and psychological wellbeing. However, the relationship between special students, self-regulation and psychological wellbeing was significantly positive. The Pearson product moment correlation of normal students revealed that there was no significant correlation found between self-regulation and psychosocial adjustment scale i.e. emotional wellbeing, social wellbeing, and psychological wellbeing. However, the relationship between special students, self-regulation and psychological wellbeing was significantly positive (See Table 3).

Table 4

Multiple Hierarchical Regression Analysis Predicting Mental Health in Normal and Special University Students (N = 120)

Variables	Emotional Wellbeing				Social Wellbeing				Psychological Wellbeing			
	Normal Students		Special Students		Normal Students		Special Students		Normal Students		Special Students	
	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1 Control Variables*	.066		.054		.027		.200		.006		.170	
Step 2	.007		.005		.048		.017		.028		.130**	
Self-Regulation		.080		.110		.231		.150		-.170		.430**
Total R^2	.073		.059		.076		.217		.033		.300	

*p<.05, **p<.01, ***p<.001 Control variables were age, gender, CGPA, no. of siblings, birth order, family structure, parents alive, type of disability, reason of disability

The results for normal students show that after adding and controlling demographic variables like gender, and parents alive; the self-regulation was added in second step and the overall model experience as 07.3% variance for emotional wellbeing containing F (3, 56) = 1.46 p < .01. social wellbeing showed 07.6% variance, whereas F (3, 56) = 1.53 p < .01. Self-regulation has proved to be the significant and positive predictor of social wellbeing. The psychological wellbeing experienced 03.3% variance and F (3, 56) = 1.64 p < .01.

However, the results for special students show that after adding and controlling demographic variables like gender, family structure, parents alive, type of disability, reason of disability, pre-disability in the family; the self-regulation was added in second step and the overall model experience as 05.9% variance for emotional wellbeing containing F(7, 52) = .46 p < .01. Social wellbeing showed 21.7% variance, whereas F(7, 52) = 2.05 p < .01. Self-regulation has proved to be the significant and positive predictor of social wellbeing. The psychological wellbeing experienced 30.0% variance and F(7, 52) = 3.18 p < .01. Self-regulation is found to be the positive predictor of psychological wellbeing (See Table 4).

Discussion

The purpose of the study has been divided into two folds. In the first fold relationship between self-regulation and mental health continuum has been investigated. In second fold, prediction was assessed. The results were discussed in the light of existing literature, theoretical framework and Pakistani cultural context. First, it was hypothesized that there is likely to be a relationship between self-regulation and mental health continuum. However, there was no significant correlation found between self-regulation and mental health continuum except psychological wellbeing which positively correlated with self-regulation among special needs students only in this study.

The second hypothesis was that self-regulation will predict mental health in special needs students and normal students. The self-regulation of special needs students predicted psychological wellbeing using hierarchical regression analysis. The current findings of the study were in line with this study. Similarly, self-regulation is considered as an active process to control one's emotions. Thus, it is seen as an important factor for mental health and wellbeing. As mentioned by Aldwin (2012) this behavior is accommodating to help reach other life goals. As already said, it is an active mental health process which can be learned and enhanced. There are four most important components which can be learn through teaching or learning. For instance, self-regulation, mental health, supervision and motivation (Li & Lunkenheimer, 2025). Students who are able to regulate their own thoughts, emotions, and behavior in order to meet social standards and successfully pursue their personal goals have mastered an important prerequisite for academic success, social competence, and the maintenance of a healthy lifestyle (Diamond, 2013). Growth in self-regulation can be supported or impaired by individual and family variables (Paat, Srinivasan, & Lin, 2024). Students engaged in self-regulation deliberately plan select to control and evaluate the effectiveness of mental health. This evaluation permits them to reach an appropriate decision about how to pursue their success in the best (Vasseleu, Neilsen-Hewett, & Howard, 2024).

Various problems associated to self-regulation have been found among deaf students, most significantly among those disabled youngsters who have been facing some sort of 'bullying' or another kind of discrimination by their healthy peers at schools and other educational institutes. On this regard, it has been classified, that the lack of proper and effective communication is one of the greatest emotional and social barriers that special needs students maintain their mental health (Colley, 1981). Many special need students have lack of mental health which further contribute negative relationship with school environment (Bashshar & Elashram, 2024). Moreover, compared to students in general education, students with special needs also engage more often in problem behaviors that may disrupt their relationships with peers and teachers (Pearl, 1992). Within integrated classrooms, students with special needs are more likely to be nominated by their nondisabled peers for aggressiveness and disruptiveness, and they are also more likely to be rejected by their schoolmates (Farmer, 2000).

As, self-regulation showed high correlation with psychosocial adjustment among special need students (Eisenberg, Olson, Neumark-Sztainer, Story, & Bearinger, 2004), social media usage (Van

den Eijnden, Meerkerk, Vermulst, Spijkerman, & Engels, 2008), physical health (Barlow, & Ellard, 2006), intimate relations (Elsenbruch, Hahn, Kowalsky, Offner, Schedlowski, Mann, & Janssen, 2003) and peer relations (Hawker & Boulton, 2000). Like many other factors, physical health and its effect depends on the intensity; it varies from as minor as obesity to as great as cancer. However, special need people fall inside the category. It has been observed that the special need people have lake of mental health because they are not interaction with their surrounding environment actively. The result concluded that social wellbeing is very necessary for psychological wellbeing in special need students (Rego, Durate & Nunes, 2015). The special need students perceive little or no conception about emotional behaviors and social attitudes of the outside world, which prompts certain difficulties in their understanding of their interaction with self-regulation. Furthermore, it also has a tremendous impact on the cognitive function of an individual. Moreover, in present study deaf and mute students showed the reliability of psychosocial wellbeing equally to that of normal students. However, the reliability of psychological wellbeing was low as compared to normal students but significant. Self-regulation and psychosocial wellbeing are affected by each other. The younger generation of the deaf and mute section of our society experience a diverse range of mental and emotional health problems which is significantly connected to their problem of self-regulation. In many cases, as a result of this behavior problem in self-regulation, experience a deep trouble in adapting to their surrounding environment and situations of their life (Glickman & Gulati, 2003). With reference to conclusion, psychological wellbeing has relationship with self-regulation. It can be said that psychological wellbeing positively predicts the self-regulation of students and its effects on the success and achievement of students.

Conclusion

In the current study the results were contradictory from previous studies and self-regulation showed no correlation between psychosocial wellbeing, i.e. emotional wellbeing, social wellbeing and psychological wellbeing. However, self-regulation and psychological wellbeing were showing high correlation among special need students only. The hierarchical regression analysis further proved psychological wellbeing predicted self-regulation among special need students only.

Limitations

i. The data of special needs was not easy to collect as it was hard to communicate them personally.
ii. A long procedure of data collection is required to take date data from special need students because the researcher would need to carry on an expert of special need students' gesture and symbols.

Suggestions

1) The study can be further can be elaborated using a larger group sample and other age group of children.
2) Furthermore, the self-regulation should be related with special need students' psychological wellbeing in next studies should be considered for the social life effecting self-regulation, mental health and success of students, especially for special students.
3) It is advice to conduct the research in different universities of Pakistan.

Implications

1. The present research will be productive for psychologist to produce new strategies for special need student's self-regulation in Pakistan.
2. Present research can give empirical justification in the policy discourse of psychiatric department of Pakistan.
3. Psychologist new projects for special need students in universities are important for their mental health.

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The Conception and design: Hafiz Farhan Gohar. Literature Review, Collection and refined data by Anam Zahra. Analysis and interpretation of the results: Drafting and Critical revision of the article for important intellectual content by Hafiz Farhan Gohar.
Hafiz Farhan Gohar. Corresponding Author Gmail: fomi81@gmail.com
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