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New Horizons

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EDITORIAL NOTE

It is with great pleasure that we present Volume 19, Issue 1 (January–June 2025) of the New Horizons Research Journal of Greenwich University. This issue brings together a diverse collection of scholarly contributions that addresses contemporary challenges and emerging discourse across multiple academic domains.

The articles featured in this volume explore critical themes shaping today's intellectual and societal landscape. These include "The Significance of Artificial Intelligence and Data Sciences in Transforming Agriculture and Water Systems in Sindh", an important examination of technology-driven development; a qualitative inquiry into student awareness titled "Understanding Climate Change Perceptions Among University Students"; and an insightful study on "Perceived Parenting Styles and Psychological Correlates in Alpha Children", highlighting evolving parenting paradigms in Pakistan. Further enriching this issue, the article "Virtual Escapism: Role of Introversion and Anxiety in Internet Gaming Addiction" offers a timely psychological perspective on digital-age risks, while "The Role of Positive Masculinity in Economic Participation of Women" contributes a progressive sociological lens to gender and economic empowerment.

We extend our sincere gratitude to our esteemed Vice Chancellor, Dr. Seema Mughal, and Provost, Dr. Naveed Ahmed Mughal, for their continuous guidance and commitment to advancing research excellence. Our heartfelt thanks to the Editorial Advisory board for their dedicated efforts, and to all authors whose valuable scholarship has made this issue possible.

We hope this volume inspires further research, dialogue, and innovation within the academic community.

Dr Ambreen Atiq
Editor
New Horizons

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Significance of Artificial Intelligence and Data Sciences in Agriculture & Water Transformation in Sindh Dominance

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ABSTRACT

The research paper aims to emphasize on Artificial Intelligence and use of digitization in water & agriculture significance in Sindh. Water and Agriculture Management has always been a crucial debate in Sindh. Somehow, the relevance of water management is related to agriculture development and growth; therefore, signifies the role of data sciences, Hydro-Agro Informatics (HAI). The HAI combines hydrology, agronomy and also informatics that is beneficial for agriculture practices. AI in agriculture and water involves procedures- technique of scientific technology and its application. The real advancement in water management can be possible with AI. The paper also focuses on few challenges that HAI focuses on includes water scarcity, efficiency in agriculture and irrigation methods as well as utilizing advance technology. Data Collection and sensors is major focus for increasing efficiency in agriculture and irrigation. The usage of utilizing advance technology in weather station is also an important concept in HAI. The study concludes IoT (Internet of Things) can be game changer for agriculture and irrigation best practices.
Keywords: remote sensing; hydro-agro informatics, smart irrigation System; water conservation; IoT, crop rotation; diversification and adaptive decision support system.

Introduction

Sindh, is already trapped under many issues out of which water scarcity is most prominent. Sindh's economy relies heavily on irrigation. River Indus primarily plays a major role in providing water to distributaries at large scale. Sindh with adapting HAI advance techniques can

increase efficiency HAI works for integration of both water and agriculture transformation with use of advance technology (Vijendra Kumar, 2024). In this case, irrigation efficiency can solve Sindh's water scarcity issue. Also, data- driven decision-making system can help farmers, policy makers, engineers and state for further growth and development. This method can help in better decision making in terms of providing water to farmers to irrigate land; perhaps free flow of water. Moreover, with data-driven decision making and sustainable agricultural practices should be promoted in Sindh (Juan Cao, 2021).

Sindh is also facing extreme climatic conditions, heatwave, less rainfall and fluctuating weather temperature. In order to mitigate and control extreme climate conditions, policy makers suggest for conducting risk assessment at earlier stage. Advanced forecasting tools can also help agriculturalist to monitor risks associated with climate impact. This can also guide farmers to plan and understand prior risks therefore, smart climate adaptation can help in better decision making (L, 2023). There are many socio-economic benefits associated with HAI. Firstly, it can enhance overall productivity in terms of more crop per drop making Sindh food secure. Also, farmers can be benefitted with better knowledge perhaps farmers empowerment can also improve livelihood of rural women and children. Also, agriculture subsidies can also benefit smallholder farmers in long term. Sindh is already facing a lot of issues pertaining to changes in climate, water scarcity and ensuring sustainable green practices that are primarily main concerns of the government. HAI is concerned with data-driven techniques that require extensive work in satellite imaginary, geographical data collection and also remote observation. Besides agriculture productivity issues, Sindh is now facing problems in changing catastrophic flooding in the recent past years that has hampered agriculture as well as water production. Somehow, the agriculture and water data is not sufficient to meet the day to day challenges of water service delivery as well as agriculture production (Ahmed

A. Abdelhafez, 2020). The HAI program will fill the gap to provide nexus between water and agriculture productivity by managing water service delivery.

This HAI system can assess the existing framework along with ground water management system to enhance the overall water productivity. Also HAI is significant in terms of ensuring quality assurances of existing remote session data already been utilized in several projects. In this case, three barrages play an extensive role i.e. Guddu, Sukkur and Kotri barrage through 14 canals. In Sindh, ground water also plays supplementary role where water service delivery is comparatively less. The water quality is also poor and is saline or brackish (Mohd Javaid, 2022). Few of the water management challenges that are common also includes aging irrigation infrastructure, water delivery and pricing, deteriorating water quality and extreme climate conditions. Also, Sindh is facing socio-economic challenges such as extreme poverty, lack of awareness, lack of institutional set-up as well as other policy challenges. HAI can therefore make efficient use of water resources including monitoring of canal water. The HAI can also account for water distribution and efficient use of water (Ghalib Muhammad Shahriar Himel, 2023) The integrated Water Resource Management (IWRM) and Participatory Water Management also focuses on making strong bodies with farmers organization and aligning it with Area Water Board (AWB).

Efficient water management also accounts for smart irrigation system and practices by involving data that can predict weather forecast that is detrimental for water availability and delivery for effective forming. Most of the data shows that better water allocation can be beneficial and HAI can help farmers to provide water if required at certain level. This can also increase crop productivity. Farmers in long term can get used to decision based on best time for plantation, pest content as well as better farming (Kuntal Das, 2010). Advance HAI programs can also help in yield prediction models, hence allowing farmers to predict soil efficiency and soil

moisture. HAI tools if used efficiency can also benefit farmers in long term i.e. the farmers can practice crop rotation at real point in time. Soil quality and health are also important in case of maintaining agriculture productivity. Therefore, sustainable agriculture practices are one of the main objectives of HAI tools and models. perhaps the role of climate resilience can also play a major role such as in controlling the environment through efficiency of water through better agricultural practices (Tawssef Ayoub Shaikh, 2022). Sindh can reduce the issues of water logging, water salinity and also source of the major issues involving soil erosion.

The hazardous environmental impacts can somehow be continued with efficient use of water resources and protcting crops and livestock. The HAI advance tools and practices thus involves environmental safety technology that is beneficial for agriculture and environment. In 2018, UN FAO also presented in their report Presented major concerns over catastrophe in controlling food insecurity particularly in lease developed countries most of the technological advancement in AI can definitely help in agriculture and food productivity and also addressing major challenges of increasing global population that has affected the overall equilibrium of demand and supply (Raj Kumar, 2021). The AI application along with HAI can help farmers in empowering others and to contribute in performing and carrying out tasks that are time taking. Machine learning, IoT can also optimize the level of efficiency both in food and water productivity. These applications can also help in maintaining growth levels, forecasting weather and climatic changes. The stakeholders and policy makers can also focus on effective agricultural practices (Margaret A. Goralski, 2022).

Literature Review

The few data collection methods that can help in data collection as well as sensors include the soil moisture sensors can help in measuring the overall soil level for irrigation that can further help in efficiency and optimizing irrigation (Abdellatif Soussi, 2024). Also, the

weather stations are great help in terms of predicting weather; also using satellite imagery for analyzing crop health and also the quality of soil. Moreover, the HAI data analysis will include some of the major tools that are predictive analytics (S. V. S. Ramakrishnam Raju, 2022). Through Predictive Analytics one can analyze the data and also estimate the general water needs and also analyzing historical data. Hence, this can further be used for irrigation scheduling. Also, Drip & Precision Irrigation can also be used in water thrift cropping utilizing minimum water with maximum yield. AI Technology can also assist in water control (Olutobi Adeyemi, 2017). For sustainability and efficient water use, sustainability practice can help in making strategies for applying practice and focus ultimately on using less water.

The sustainable farming can be another technique if applied can promote efficient use of water. Most of the literature showed that crop rotation can further help in better production. Crop rotation and diversification can be beneficial in long term for sustainable farming. Geographic Information System (GIS) is another method to examine and mapping of water resources. GIS can also benefit and assist in investigating spatial data pertaining to irrigation (Yacob Abrehe Zereyesus, 2021). Irrigation management can also include adopting Smart Irrigation System such as adopting automation structure to regulate water delivery and on time. Based on real time data this data can be analyzed further for decision making process. The Decision Support System (DSS) is being adopted by various sources for in order to help farmers in decision making process for resource allocation, sustainable farming and planting. The initial HAI program in Sindh can successfully help in sustainable growth and agriculture practices (Brian E Mennecke, 1996). Most of the literature review shows that HAI program can also be beneficial for Sindh's water productivity and sustainable growth levels.

Challenges in adopting HAI Model

One of the biggest challenges in adopting HAI is lack of infrastructure in Sindh as the province lacks institutional development due to lack of infrastructure. Also, internet connectivity is also very low and some areas one affected by no connectivity at all. The lack of resources/tools in data collection system has also overall affected. Another challenge with adopting HAI model is farmers/practitioners lack necessary skills to counter and manage data. The IoT is also now active with the aims to manage data efficiently. The extensive training in this program can be beneficial for work force in order to account overall agriculture produce. However, HAI sometimes also involves usage of advance technology, therefore, training and capacity building is necessary for all professionals involving in agriculture sector. The farmers should be well equipped in terms of usage of technology and managing data efficiently.

In case of sensitive data collection, there is a need to handle data efficiently with privacy and security. Also, farmers can be trained by agricultural professionals to handle sensitive data and information regarding forecasting, crop management, crop rotation as well as water delivery. There are various research tools available for advance agro-informatics that can involve various tools that can be beneficial for food security, agriculture production and consumption, carbon accounting as well as policy making.

The information and communication technology (ICT) tools are advanced in terms of monitoring and also improvement in artificial intelligence. The forming practices should also involve GPS machinery to control the farming practices. The role of agro-informatics in this case is essential such that there should be application of models. The sensors are also embedded in the case to support satellite imaginary and control the overall agricultural growth and production. The weather situation can counter the weather information. The weather control department can also counter the forecast.

Key Application of HAI Model

The HAI model uses field level management that will utilize system of application and usage of model. GPIS system that can look after crops and agriculture produce. This approach can utilize to look after agriculture produce and can involve reducing waste and also crop consumption pattern. The crop health can also be improved with sufficient content such as water conservation and practices. Agriculture practitioners can further be trained to manage agriculture and crop rotation. Through crop rotation, the farmers can benefit the agriculture production and consumption.

It is also important to manage the resources efficiently and timely. There is also a need to protect the ecosystem and its management. There is overall agriculture supply chain that is involved while looking at the entire agricultural model. Also, this will involve other stakeholders as well in the agriculture supply of farmers, water distributors, forecasting and also the agriculture production. Also, for sustainability and efficiency, there is a need of streamline the HAI practices throughout Sindh by tooling at its benefits. Another benefit we can get through HAI is better resource management. Farmers can use sustainable farming along with resources management to optimize the overall produce. AI in agriculture can transform crop production, crop rotation and can also balance the demand and supply of crops (Neethirajan, 2020)

AI in agriculture and water productivity

Discussion

The future trends of hydro informatics require adoption of AI and machine learning. Farmers need to switch from traditional means to advance predictive tools that can be helpful in managing water. Also, IoT can built up better connectivity in terms of monitoring & evaluation as well as controlling modern devices and tools under farming. Sindh is also facing some of the challenges in focusing on implementing policies already drafted such as Sindh Water Policy and Sindh Agriculture Policy. Both the

policies are supporting in sustainable best practices in implementing successful modeling in Sindh. The biggest challenge is therefore accounting for policies that can help in agriculture management and production.

Modern farming practices are mostly driven by smart technologies and practices to transform overall agriculture process. The world's focus is now on adapting smart sensors, IoT and AI to optimize crop rotation and management. The current revolution in water and agriculture sector is due to GIS & GPS. This has also improved the productivity and also increase crop yield. Globally, most of the water is utilized in irrigation use. Hydro-informatics exists and has been applied by many agriculture and water experts. The application includes hydraulics, environmental sciences, management and operations. The modern system of development in water sector encounters use of HAI, whereas, the traditional means of agriculture resulted in low water efficiency as well as low productivity.

The world is now focusing on food security in order to control environmental factors that can promote effective monitoring through water control and water use. There has been rapid change in water serving and conservation in Sindh in past many years. There is also need for appropriate irrigation system of management that can promote smart agriculture application. The scope of HAI can be seen reaching towards various GIS based programs that includes data facilities, water overflow assessment, flow and irrigation monitoring as well as ground water monitoring and control. The new tools in monitoring water service delivery can also increase the overall scope of hydro Extra Informatics Here, the role of science and technology plays a vital role in fulfilling the overall need and criteria of water governance. The government while introducing HAI mechanisms can also work on research and development of irrigation and water resource management by expanding the overall water resources. State can also expand its scope for development at various paradigms of research and can further focus on modeling system, Decision Support System (DSS), surveying technology and Real Time data surveying.

Furthermore, with the introduction of artificial intelligence most of the water related data can be stored using big data or cloud that can help in digital storage. Also, there are now changes with climate that can be a major source for transformation in water and agriculture practices. The enhanced practices can therefore come when farmers can adopt community water resources management program to overcome global food security crisis. The most common concerns in the global world are resulted due to increasing population and migration crisis both forced and voluntarily. Globally, the increase in migration and population has created an alarming situation and somehow it has also impacted the demand and supply of water and agriculture. In this situation the state should take measures in sustainable water resource management water resources and its efficient management is often influenced by factors such as politics economic social as well as environmental concerns.

Moreover, the long term challenges of agriculture and water productivity can be solved only with AI. AI application can help farmers predict the climatic changes and in extreme conditions it can be helpful. The monitoring patterns can smoothly be monitored using these applications that can help in maintaining efficiency and long term planning.

Conclusion

DSS can help farmer community in general in order to control water waste as well as optimizing water use and reducing water cost. HAI can be beneficial in increasing crop yield and also enhance water efficiency and control. Most of the farmers in Sindh often gets in trouble in not receiving water on time (David James Molden, 2003). Providing right amount of water through hydro informatics can promote in environmentally friendly agrobusiness pertaining to select best practices out of it. Better sustainability can also conserve water resources and contribute to effective water management. There are always challenges associated with HAI i.e. managing large volumes of data can be problematic. At times,

farmers cannot get accurate data in presence of bulk data. Also, farmers can also show reluctancy or fear in adopting new technology as they are used to traditional methods of irrigation. Even if they adopt new technology farmers may get benefit in long run for initial investment; having no benefits in short run (Andrea Momblanch, 2018).

The future of HAI is concerned in filling the gap between agriculture and water users. The accessibility and availability of more water resources can further fill in the gap. Also, the government can help in disseminate information on water production as well as conservation. It is also recommended that Sindh can work on massive digital mechanism in terms of decision support services both for agriculture and water component. Sindh government can also take steps in making departments responsible for their own actions in terms of making overall HAI system more reliable.

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UNDERSTANDING CLIMATE CHANGE PERCEPTIONS AMONG UNIVERSITY STUDENTS: A QUALITATIVE ANALYSIS

Dominance

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ABSTRACT

There has been an increase in Climate change awareness since the 1980's and the people in developed countries are taking measures to dealt with its adverse effects. Even the United Nations Organization (UNO) recognizes the impact Climate change causes on both social and economic development and that combating towards its adverse effects has been declared a global sustainability goal (SDG) for the UNO. The developed countries are actively working towards this SDG, however there a vast amount of unawareness observed within the developing and underdeveloped countries' population, who show less concern towards the risks associated with Climate change. Our aim of this research is to investigate what perspectives the young student population in a developing country (Pakistan) keeps regarding the Climate change problem. For this qualitative study, nine semi-structured and open-ended questionnaires about Climate change awareness were formulated and about 112 students from University of Karachi participated in this qualitative study through convenient sampling. The responses from those interview questions were analyzed based on the themes that were occurring frequently. Some of the themes which were generated from the answers were; lack of awareness, moderate risk perception, accurate awareness, high knowledge, moderate awareness, positive impact on mood, negative impact on mood, negative impact on mood and cognition, lack of cooperation, and pro-environmental behavior. Themes such as lack of awareness and pro-environmental behavior were occurring the most frequent as compared

to other significant themes identified from the participant's responses, which does indicate that individuals showed a lack of awareness regarding information of climate change yet also showed interest towards pro-environmental or environmentally friendly practices if given the feasibility.

Keywords: *Climate change, college students, qualitative study, semi-structured questionnaire*

Introduction

Climate change has been defined by Weber (2010) as a systematic change in average conditions over time. This change is tough to detect and see without numerical measurements, making it difficult for cynics to believe that climate change is happening (Weber, 2010). Climate Change is a global phenomenon, which means its significance over our daily lives cannot be undermined and that its adverse effects pose a public health risk. According to World Health Organization (WHO), Climate change causes serious damage to basic human living requirements, such as unsanitary water conditions, food shortage, and impure air, Global warming etc. Climate change also represents many scientific and technical hazards, which further involves our social and mental factors, such as personal experiences, affect and emotions, intentions, trust, values, and worldviews. (Slovic,2000)

Climate change itself is an ongoing process which is mostly driven by human activity in the form of increased emissions of greenhouse gases and into the atmosphere (IPCC,2013). The global, environmental and societal implications of a changing climate demand immediate action at both individual and societal levels in order to mitigate potentially serious consequences. However, individuals find it difficult to understand the complexities underlying the science of climate change, as well as what could be the long and short term affects over them. Even researches indicate that highly educated adults also possess limited knowledge about climate change and its global impacts. (Sterman &Sweeney, 2007)

Moreover, when media attention towards climate change issue increased, so does the growing confusion among

populations regarding the causes of climate change issue increased.

Literature Review

Research studies involving both students and the public revealed several of these misconceptions, including: (1) confusion between weather and climate (Gowda, 1997), (2) identifying stratospheric ozone depletion as the primary contributor to global warming (Bostrom. 1994; Gowda et al. 1997), and (3) linking unrelated pollution effects (e.g., litter, photochemical smog, and radioactive waste disposal) to global climate change. (Gowda, 1997; Keller 2006; Papadimitriou 2004; Read, 1994). Furthermore, misattributing short-term weather fluctuations to long-term climate factors may result in difficulty understanding the concepts of deep time or the timing and relationship between geophysical events that have occurred during the Earth's history (Dodick and Orion 2003).

Due to these confusions and misinformation regarding the phenomenon of climate change, there has been a surge of integrating climate change education in many educational curriculums from the 1990s in order to raise concerns for the harmful effects of climate change. Higher education has a critical role in educating college students about global climate change. That is why climate literacy among college students is essential as they'll be facing situations where they'll have to make decisions related to environmental aspects and when they'll have a solid understanding of about global climate change and human interactions, they'll be more likely to take preventive and pro-environmental actions in their personal and social lives. (Rebich and Gautier, 2005).

There is another factor which influence the way individuals receive and maintain beliefs about climate change; that is their socio-cultural backgrounds, that are highly diverse and difficult to study objectively (Dunlap and Jacques 2013; Fabiyi and Oloukoi 2013). Climate change perceptions are locally situated and is shaped by individual's attitudes and beliefs' (Bunce, 2010; Carlton and

Jacobson 2013). People are good observers of their environment and that those who have experienced the adverse effects of climate change in their local areas are likely to perceive the problem of climate change as a risk. The level of concern differs according to where people live, such as in an urban or rural area and whether they are adapted to adverse climatic events (Ayanlade and Jegede, 2016).

It has been also found that university student perception about climate change also vary according to the educational field they're enrolled in. A study conducted on Nigerian university graduates concluded that graduates in environmental sciences had more class experience on climate change than those in other disciplines (Ayanlade and Jegede, 2016). Another study on two universities of south-western USA concluded that the faculty from science, agriculture, and natural resources had significantly greater perceived knowledge about climate change compared with engineering, business and hotel management, and education and educational outreach faculty (Beck, 2013).

Limited research has been conducted on the understanding of individuals and communities for their role in climate change perception and adaptation, and is much less in the developing countries student population. (Whitmarsh et al. 2013). Research on risk perceptions of climate change in developing countries is crucial as these nations need a versatile ability to react to climate changes (Shisanya and Khayesi, 2007). Therefore, this qualitative research aims to explore the perceptions and awareness of climate change amongst the student population of a developing country like Pakistan, and would want to investigate if the young student population perceive the insidious yet adverse effects of climate change as a risk. By exploring these perceptions of climate change, this research seeks to explore other factors influencing the conceptual framework of climate change as well as contribute to the existing literature on the topic and provide insights and suggestions for the future researchers.

weather stations are great help in terms of predicting weather; also using satellite imagery for analyzing crop health and also the quality of soil. Moreover, the HAI data analysis will include some of the major tools that are predictive analytics (S. V. S. Ramakrishnam Raju, 2022). Through Predictive Analytics one can analyze the data and also estimate the general water needs and also analyzing historical data. Hence, this can further be used for irrigation scheduling. Also, Drip & Precision Irrigation can also be used in water thrift cropping utilizing minimum water with maximum yield. AI Technology can also assist in water control (Olutobi Adeyemi, 2017). For sustainability and efficient water use, sustainability practice can help in making strategies for applying practice and focus ultimately on using less water.

The sustainable farming can be another technique if applied can promote efficient use of water. Most of the literature showed that crop rotation can further help in better production. Crop rotation and diversification can be beneficial in long term for sustainable farming. Geographic Information System (GIS) is another method to examine and mapping of water resources. GIS can also benefit and assist in investigating spatial data pertaining to irrigation (Yacob Abrehe Zereyesus, 2021). Irrigation management can also include adopting Smart Irrigation System such as adopting automation structure to regulate water delivery and on time. Based on real time data this data can be analyzed further for decision making process. The Decision Support System (DSS) is being adopted by various sources for in order to help farmers in decision making process for resource allocation, sustainable farming and planting. The initial HAI program in Sindh can successfully help in sustainable growth and agriculture practices (Brian E Mennecke, 1996). Most of the literature review shows that HAI program can also be beneficial for Sindh's water productivity and sustainable growth levels.

Methodology

Research Design

A qualitative approach was used to collect data from students about their perceptions and awareness towards climate change. The data was collected by constructing nine interview questions through two pilot studies and selecting participants through convenient sampling method.

Sample

112 participants, from the premises of University of Karachi, participated in this qualitative research.

Measures:

Informed Consent Form

The informed Consent form contains a brief introduction about the study they are participating in, they were informed about keeping their credentials anonymous and that their participation in this study is voluntary. Under the Informed Consent Section, there is a demographic section, which collects the information about participant's age, gender, education level, and department name.

9-item Semi-Structured Questionnaire of Climate Change Awareness

About nine open ended and semi-structured questions regarding climate change awareness were formulated which were themselves the outcome of two pilot studies conducted before the actual research.

Data Collection

The participants were approached and selected conveniently. They were given the informed consent forms along with the semi-structured questionnaire of climate change awareness in a noise-free classroom. The participants were encouraged to write their answer more detailed rather than yes and no. Once they were done filling the descriptive questions, they were properly debriefed about the qualitative study and were thanked for their participation.

Table 1: Themes generated in first pilot study.

S.No.	Category	Questions	Themes	Frequency
1	Knowledge	1. What is your understanding about global warming?	Lack of awareness	22
		2. What information do you have that is necessary to prepare for the impact of climate change?	Mediocre Awareness	
2	Risk Perception	3. How do you think climate change is impacting different regions of the world?	Moderate risk perception	19
		4. What are some of the significant factors contributing to climate change in your opinion?	Inaccurate risk perception	
3	Impact on Mood & Energy	5. How does spending time in nature typically make you feel?	Positive impact	22
		6. Have you ever noticed changes in your mood during particularly hot or extreme weather?	Negative impact	
		7. Have you ever faced anger due to climate change?	Negative impact	
		8. Does climate change affect your mood or energy?	Positive impact	
4	Impact on Decision Making	9. Have you ever considered how climate changes might influence your decisions?	Influence decision making	23
5	Pro-environmental Behavior	10. Have you ever reduced your energy consumption in response to what you have learned about climate change?	Mediocre pro-environmental behavior	26
		11. Are you willing to pay higher prices for products or services that are environmentally Friendly?	Compromised pro-environmental behavior	

Table 2: Themes generated in second pilot study.

S.No.	Category	Questions	Themes	Frequency
1	Knowledge	1. What is your understanding about Global Warming?	Moderate knowledge	21
2	Risk Perception	2. How do you think climate change is impacting different regions of the world?	Accurate Risk Perception	22
		3. In your opinion what are the different factors contributing to climate change?	Accurate risk perception	
3	Impact on Mood & Energy	4. How does spending time in nature typically make you feel?	Positive impact	24

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S.no	Category	Questions	Theme	Frequency
		5. How does climate change affect your mood or energy?	Positive Impact	
4	Impact on Decision Making	6. How does climate change influence your decisions?	Negative Influence	26
5	Pro-environmental Behavior	7. Would you take any measures for your energy consumption (electricity, water, fossil fuels etc.) with the knowledge that you currently have regarding climate change?	Shows pro-environmental behavior	24
		8. Let's say; Store A gives you plenty amount of plastic bags to carry your groceries home. While Store B charges Rs.10 for every bag (which is biodegradable and can be planted into a seed later) that they provide you. Which store would you prefer to shop and why?	Shows no pro-environmental behavior	
		9. In your opinion, what Precautionary measures could be taken to lessen the impact of Climate change?	Moderate Pro-environmental Behavior	

Table 3: Themes generated in the main research study

S.no	Category	Questions	Theme	Frequency
01	Risk perception, Awareness	How do you think climate change is impacting different regions of the world?	Lack of awareness Moderate risk perception Accurate awareness	45 37 30
02	Awareness, knowledge	What is your understanding about global warming?	Lack of awareness High knowledge	84 28
03	Awareness, knowledge	In your opinion what are the different factors contributing to climate change?	Moderate awareness Lack of awareness Accurate awareness	37 65 10
04	Impact on mood	How does spending time in nature typically make you feel?	Positive impact on mood	112
05	Impact on mood	How does climate change affect your mood or energy?	Positive impact Negative impact	53 59
06	Impact on cognition	How does climate change influence your decisions?	Positive impact on mood Negative impact on mood and cognition	23 89
07	Pro-environmental behavior	Would you take any measures for your energy consumption (electricity, water, fossil fuels etc.) with the knowledge that you currently have regarding climate change?	Lack of cooperation Lack of awareness Pro-environmental behavior	18 30 64

| 08 | Pro-environmental behavior | Let's say; Store A gives you plenty amount of plastic bags to carry your groceries home. While Store B charges Rs. 10 for every bag (which is biodegradable and can be planted into a seed later) that they provide you. Which store would you prefer to shop and why? | Pro-environmental behavior

Lack of cooperation | 80

32 |
| 09 | Pro-environmental behavior, awareness | In your opinion, what precautionary measures could be taken to lessen the impact of climate change? | Pro-environmental behavior

Lack of awareness | 74

38 |

Discussion

The purpose of this qualitative study was to explore and investigate the perceptions of student population of developing country (Pakistan) has regarding the Climate change issue and if they perceive it as a risk. For this study, about nine semi-structured questions were formulated in which the participants were asked about climate change and its affects as well as if they would engage in environmentally friendly tasks if given the opportunity.

To formulate these questions, brainstorming sessions were held and many semi-structured questions were suggested to be added for the respondents. Then after the restructuring and selection of open-ended yet comprehendible questions, about eleven questions were finalized and first pilot study was performed. About 27 classmates performed the pilot study, and themes were generated by the researchers for the thematic analysis. However, due to many contradictory themes and subthemes arising, another pilot study with the 27 classmates was performed again, and about nine questions containing the most comprehensive themes were selected to conduct the main qualitative research. About four participants were selected for this study through convenient sampling method. They were given the informed consent form along with the nine semi-structured questionnaire, which they filled while sitting in a noiseless classroom. The participants were encouraged to write detailed answers to the open-ended questions. After that, the thematic analysis is applied to

the respondent's answers.

Some of the themes which were generated from the answers were; lack of awareness, moderate risk perception, accurate awareness, high knowledge, moderate awareness, positive impact on mood, negative impact on mood, negative impact on mood and cognition, lack of cooperation, and pro-environmental behavior.

However, when it was thematically analyzed which themes are the most frequent ones, two themes emerged as the most prominent, that is lack of awareness and pro-environmental behavior. By lack of awareness, we meant that most respondents showed that they possess no information regarding the phenomenon of climate change and don't perceive it as a risk. By pro-environmental, we meant that respondents greatly supported environmentally friendly practices when they were asked if they would conserve energy resources and buy biodegradable products. Moreover, participants also quoted that they feel nature has a positive impact on their mood and cognition as well as how adverse conditions also influence their daily life decisions alongside their mood.

In my opinion, there is a growing need for the addition of environmental sciences courses or subjects in educational curriculum and media programs so that we won't see such ignorance and lack of awareness for climate change in our youth and combat against its adverse consequences by adopting pro-environmental attitude. Many governmental policies could be shaped in such a way that it supports the sustainable goal of climate action and encourage the citizens to comply to pro-environmental practices by reducing energy consumption and carbon emissions etc. There are studies that also signify how climate change awareness can bring about positive feelings as well as inculcate pro-environmental behavior in individuals. Pro-environmental behavior refers to the behavior which consciously seeks to minimize the negative impact of one's actions on the natural or built world (Kollmus & Agyeman, 2002), or even benefits the environment (Steg & Vlek, 2009). Engaging in pro-environmental behavior has been associated with not just conservation of the

natural environment but gains to personal wellbeing (e.g., Brown & Kasser, 2005). Empirical evidence also suggests that involvement in environmental activism improves individual's well-being (Sohr, 2001; Eigner, 2001). Another study by Young (1996, 2000) also indicated that environmentally responsible behaviors provide inherent satisfaction and improve personal well-being.

Furthermore, certain limitations were also denoted in this qualitative study, which was, the sample size was relatively small and cannot be generalized to the overall student population of the developing country.

Despite these limitations, this qualitative study has enhanced our understanding regarding the awareness of student population regarding the climate change issue. We're hopeful that the current research will stimulate further investigation to fulfill those knowledge gaps existing within literature.

Conclusion

It has been concluded that there is a lack of awareness regarding information related to climate change amongst the student population of the developing country, as a consequence, they don't perceive climate change as a risk. Moreover, they also favored to perform pro-environmental activities if given the feasibility.

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Perceived Parenting Styles and the Psychological Correlates in Alpha Children: New Frontiers of Parenting in Pakistan
Dominance

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ABSTRACT

Fast transformation of social milieu, seen with the emergence of technology and bombardment of information in the form of internet gadgets and additional weight experienced during and after Covid outbreak, placed the Alpha Generation (who are now in their early/middle adolescence) to constantly pursue multiculturalism, which is in addition to their own unique physical, cognitive, and psychosocial demands, make it challenging for parents to adopt a parenting style in harmony with the idiosyncratic needs of their children, so that the goals of socialization are achieved.

The aim of the present study was to explore the perceived parenting styles and the psychological correlates of alpha children as practiced in Karachi, Pakistan. The data consisted of a sample of 200 early/middle adolescents (age range: 10 to 13 years), (89 males &111 females) belonging to all three (lower, middle, upper middle class) socio-economic strata, studying in an English medium school. To collect data, simple random sampling was used. Children were assessed on Perceived Parenting Style Scale (PPSS), Self –Perception Profile for Children (SPPC) and Child and Youth Resilience Measure (CYRM-12).The Cronbach's Alpha for perceived parenting styles was .57(Authoritative parenting style=.57,authoritarian parenting style=.62 ,permissive parenting style .68),for SPPC .88.and for CYRM-12 was .76 . The focus of the present study was: 1).What is the most prevailing parenting style in the culture of Karachi with alpha children, 2).How does parenting style impact alpha children. The research

hypotheses developed include: H1: There is a likelihood of significant relationship between perceived parenting style and self-esteem, among alpha children. H2: There would be a significant relationship between perceived parenting style and resilience among alpha children. H3: There is a possibility of a significant relationship between perceived parenting style and adjustment among alpha children. H4: There would be a significant difference between perceived parenting styles as an outcome of gender among alpha children. After scoring, analyses of data was done by using SPSS version-23. The study found the positive correlation between authoritative parenting style and psychological correlates and negative correlation with authoritarian and permissive parenting styles. Though some show statistically significant and other show insignificant hypothesized relationship between variables.

The results of the study provide the evidence of the shifting trends in parenting in the form of authoritative parenting style in Pakistan reflecting that the family unit is ready to play its new role. Implications are discussed.

Key words: *Parenting Style, Alpha Children, Self-esteem, Resilience, Adjustment*

Introduction

Some of the alpha children (who were born in 2010 t0 2013) are in their early adolescence which is a dynamic period due to rapidly occurring changes in their mind, body and psyche. Besides physical changes, they are going through a number of psychological challenges, such as, process of identity development as a unique person, unsupervised exploration of real world around them, preference to peer group over immediate family, inclination for being assertive and independent decision making. The context filled with digital technology is making them to share their thoughts and life experiences publicly, without boundaries. They will possibly grow up innovative and unconventional, have need for achievement, status, independence and competition along with self-love, impulsivity, risk taking, attention seeking and zero tolerance for ambiguity.

This makes it clear that this kind of profile requires parenting style which instill a psychological make-up necessary to overcome the challenges and inculcate a healthy and productive personality for self, community and world.

Baumrind (1973) was the initial figure to describe parenting styles, expressing the variable of balance between two elements: parental responsiveness and parental demandingness.

Responsiveness is about exercising parent's discretionary power to allow self-regulation and assertion and individuality by providing support, warmth and satisfying children's needs.

Demandingness is about parent s' desired demands placed on children by enabling them to meet behavioral standards and controls so that they are included in the family structure (Maccoby & Martin, 1983).

Parenting Dimensions

This is the approach of analyzing parenting strategies. Parenting styles are evaluated by examining three dimensions: warmth, control, and autonomy.

1. Warmth
Warmth refers to the emotional availability of parents by responding to child's needs. Warmth refers to unconditional love, care and show of affection manifested in the behavior of parents directed toward their children.

2. Control
Control refers to active, vigilant monitoring and supervision of child's ventures and interpersonal relationships. Basically, a distinction is made between two types of control:

2.1. Behavioral Control: Parents who work on the principle of behavioral control use communication strategically by establishing clear limits and boundaries , expect certain behaviors and make children to follow rules and afterwards monitor and keep vigilance over them (Sorkhabi & Middaugh, 2014; Baumrind, Larzelere & Owens, 2010).

2.2. Psychological Control: Parental use of intrusive psychological tactics such as guilt and remorse induction. The child's approval becomes conditional as parents withdraw their affection if their agenda is not accepted by children (Smetana, 2017).

3. Autonomy

Psychological autonomy makes adolescents to cultivate independent thinking and responsibility. According to Self-determination theory, the need for freedom or autonomy makes children to experience genuineness in their behavior and choices. The fulfillment of this need becomes automatic if the parenting style is based on the dimensions of high warmth, age appropriate support for autonomy, and structure by exercising behavioral control. Parental display of less warmth, freedom and structure can cause no fulfillment of the need but not to frustrated anger (Ulferts, 2020).

Thus, parenting style consists of a chain of attitudes and behaviors used by parents to rear up and coach their offsprings which by and large generate an emotional climate that remains almost steady and changeless in a variety of conditions (Darling & Steinberg, 1993).

Based on the distinct degree of responsiveness and demandingness, Baumrind outlined three distinct styles of parenting.

Authoritative style is the best compromise as parents create balance between demandingness and responsiveness. The secret for experiencing well-being in every domain of life lies in striking the right balance between limits and autonomy which provide self-sufficiency, direction and motivation to match required criteria specified by authoritative parenting style (Rueter & Conger, 1995a, 1995b). A sound foundation laid in a protective parent- child interaction enables adolescents to develop logical reasoning, values, role taking and regard for others feelings (Baumrind, 1978; Krevans & Gibbs, 1996). This results in adolescents' ability to set attainable goals, searching means to attain these goals, and controlling hurdles and overcoming difficulties encountered during working for goals (Snyder, Rand, & Sigmon, 2002). The care and warmth

expressed via parental involvement facilitate parental influence manifested in better socialization (Sim, 2000).

Permissive style makes a parent to have low level of demandingness and high level of responsiveness. The indifferent style adopted by permissive parents effects children's adjustment , devastate their mental health and other domains of behavior (Sheeber, Hops, Alpert, Davis,& Andrews., 1997).

Authoritarian style is about parents having high demands over children and low level of responsiveness. In such a parenting climate based on coercion and control, the child is unable to adjust and a battle to assert his increasing need for independence ensues in explicitly violating parental rules. This rebellion does not indicate emotional independence rather it's a reflection of child's frustration with the existing lack of parental understanding and inflexibility (Lamborn & Steinberg, 1993).Contrary to authoritative parenting, authoritarian parents are judgmental about the behavior and achievements of their offspring and expect them to meet perfect standard set by their dominant authority of parenting (Baumrind, 1971).The children become less likely to meet the perfect standards of their parents to which parents respond with punishment and force to mold and form their behavior.

Role of Culture

Various factors play role in determining specific parenting style including culture which is based either on individualism or collectivism (Grusec , Rudy, & Martini, 1997; Kim & Rohner, 2002). Without going into the debate of the difference between these two types of culture,there is change in parenting style from authoritarian to authoritativeness in industrialized countries (Doepke & Zilibotti, 2014; Bray & Dawes, 2016).For instance, Spanking, corporal punishment have decreased over time and are replaced by child-centered attitude and behavior even by less educated people. This is also reinforced by enactment of laws related to domestic violence in underdeveloped countries. The media is playing its role in uplifting the image of a better

and happy family in which parents and children seem involved in dialogue, problem solving and no confrontational relationships along the western line of thought. The impact of globalization has lessened the differences related to economic, social, generational and parenting styles. The intensive parenting culture has found acceptance by different socioeconomic and ethnicities (Ishizuka, 2019; Parker, 2015).

 Alpha children are invested by their parents since the norms of globalization and multiculturism dictate child-centeredness regardless social class and gender of the child thus we find parents having intention to intensive parenting in most of the situations as depicted in a survey conducted on 3600 parents by Ishizuka (2019) in United States.

Parenting styles and self-esteem, resilience, & adjustment According to Yang and Zhou (2008), expression of warmth which is displayed in authoritative and permissive parenting has positive association with better self-esteem whereas rebuff, hostility and negative expressions of love have negative correlation with self-esteem. Even permissive parenting style which is characterized by high warmth but low discipline or control lead to low self-esteem. The reasons behind the negative link between permissive parenting style and self-esteem may be due to feelings of insecurity, dependency on parents for approval, little achievement orientation, comparing self with peers, and emotional dysregulation (Smith &Johnson, 2023).

  Adolescents brought up with positive or negative parenting show different levels of emotional and behavioral support, which either promote or inhibit resilience in them. Gilligan (2001) found that adolescents are destined to have greater resilience when parenting allows independence, constructive control, help in adapting to monetary needs.Also encourage association with community and other societal groups. It is only recently realized that parental acceptance plays a mediating role in shaping resilience (Rohner 1986). The acceptance on part of parents make children to experience optimistic world view whereas rejection shapes their world view as pessimistic.

Adjustment is an interplay of those adaptive behaviors that make an adolescent to avail his internal and external personal attributes in order to promote complete well-being (Wang, 2023). Darling and Steinberg (1993) held that adolescent's adjustment is an outcome of parenting style (i.e. a feature of social environment of the child) and has its own independent existence and not the feature of developing person.

Studies started since 2019, show similarities between the parenting styles globally, the change is particularly seen in the parenting styles in Asia including, India, Iran, and Pakistan. A study conducted in India on adolescents from grade 8 and 9, found 93.2 % adolescents perceived their parents as practicing authoritative parenting style which was positively related with the index of psychological well-being and purpose in life (Francis, Paj, & Badagabettu, 2020). In Iran, Parents displaying greater warmth and behavioral regulation relate it to social change due to education, emphasis on individuation, family planning and increasing awareness of authoritative parenting style (Edward et al,2022).

A study conducted on a sample of adolescents in Lahore found a negative association between authoritative parenting and problem behavior (Fariha, Rizvi, & Najam, 2015).

Another study (Akhter, Noor, & Iqbal, 2019) found authoritative parenting having positive impact on children's personality. A study conducted in Karachi, found negative association between authoritarian parenting style and academic performance (Rauf K, Ahmed j, 2017). The studies conducted since 2016 indicate as the foundation stone toward the practice of authoritative parenting in Pakistani culture.

Rationale

The aim of the study was to investigate the most practiced parenting style in face of challenges and opportunities experienced by alpha children in a globalized world and how they are related to psychological correlates of self-esteem, resilience, and adjustment. The research also aimed to describe how culture influences the parenting styles in the city of Karachi, Pakistan through children's perception of parenting styles and timeline finding from previous researches conducted on the topic of parenting in Pakistan

Research Questions

1).What is the most common parenting style in the culture of Karachi with alpha children,

2).How does parenting style impact alpha children.

Hypotheses

H1, There is a likelihood of significant relationship between perceived parenting style and self-esteem, among alpha children.

H2, There would be a significant relationship between perceived parenting style and resilience among alpha children

H3, There is a possibility of a significant relationship between perceived parenting style and adjustment among alpha children.

H4, There would be a significant difference between perceived parenting styles in two genders among alpha children.

Method

Sample

The sample of the study consisted of 200 participants (89 males & 111 females) with age range between 10 to 13 years old from English medium schools. The grade levels included 5, 6, 7, & 8. The technique to select subjects was simple random sampling. Though the measures were taken in a group of 10-15, the participation was purely voluntarily and anonymous.

Measures

1. Demographic Information

The demographic information form was developed which consisted of seeking information including name age, gender, grade level, socioeconomic status, family structure, and parents' education.

2. Perceived Parenting Style Scale (PPSS)

To assess perceived parenting style, Perceived Parenting Style Scale (Divya T, V & Manikandan K, 2013) was administered to early adolescents. The scale is based on three types of parenting styles including Authoritative, Permissive, and Authoritarian.

The scale is composed of 30 items which measures responses on a 5 point Likert Scale (1=strongly disagree,2=disagree,3=neutral,4=agree, and 5=strongly agree).

The reliability in terms of Cronbach's Alpha coefficient was 0.52, 0.62, and 0.66 for authoritative, authoritarian, and permissive parenting style, respectively.

3. Self –Perception Profile for Children (SPPC) (Susan Harter, 1985)

The SPPC has been widely used in various researches to study psychological adjustment (Such as Susan Harter & Nancy Whitesell, 2009., Heather et al, 2005) The scale is based on the theoretical assumption that others beliefs about self are internalized by children (Harter, 1998, 1999) which are manifested in their expectation about self to excel in academic, social command in peer group, sports competency, physical appearance, behavioral conduct and self-worth.

There are six items in each subscale, making a total of 36 items. In each domain, the technique of counterbalancing is used .Hence three of the items are scored 1, 2, 3, 4 and the remaining three are scored 4, 3, 2, 1. Internal consistency in terms of Cronbach's alpha for different grade levels, ranging from grade 5 to grade 8, was 0.88.

4. Child and Youth Resilience Measure (CYRM-12)

To assess resilience an omnibus version of CRYM, (CYRM-12) developed by Linda Liebenberg, et al (2013)

was administered. It is a brief scale validated to use for the age range of 10 to 18 years old children. This 12-item version covers the individual ability and their social ecology consisting of personal, social, community and cultural domains that bind together to facilitate positive outcomes by bouncing back from adversity. The Cronbach's Alpha of the scale for the present study was 0.76.The scale consists of 12 brief items to capture personal, age mates, relational, educational and community based support system that guards adolescents against potential risks and ensures a multi-level protection. The resilience is scored by summing all items on a 5-point scale.

Research Design

To test the hypotheses, self-report inventories were used. Each subject served in both the conditions of independent (perceived parenting style) and dependent variable (self-esteem, resilience, & adjustment).Separate Standard instructions with each scale were given at the time of administration.

Ethical Considerations

A written permission letter by the departmental head was provided to head mistress /headmaster of each school. They were also described the details , purpose of the study, and approximated administration time for self-report scales .A separate consent form in Urdu was developed to be signed by parents on school requirement .The researcher ensured about confidentially,anonymity,right to withdraw from participation to both ,school head and students. The whole process of questionnaire administration took about 25 to 30 minutes.

Results and Conclusion

Table 1: Respondents demographic characteristics

Respondents' characteristics	percentages
Gender	
Male	44.3%
Female	55.2%
Age of the Respondents	
10 years old	3.0%
11 years old	23.9%
12 years old	39.3%
13 & above	33.3%
Grade Levels	
5th grade	35.8%
6th grade	29.9%
7th grade	25.4%
8th grade	7.5%
9th grade 1.0 %	
Number of Siblings	
None	3.5%
1	10.9%
2	25.4%
3	30.8%
4 & more	28.9%
Socioeconomic status	
Low Class	16.9%
Middle Class	75.1%

Upper Class		7.5%
Mother's Education		
	Matric & below	53.2%
	Intermediate	19.9%
	Graduation	15.4%
	MA	10.9%
Father's Education		
	Matric & below	45.3%
	Intermediate	23.9%
	Graduation	11.4.4%
	MA	17.9%
	Other	1.0%
Family Structure		
	Joint	49.8%
	Nuclear	49.8%
Spoken Language		
	Urdu	60.2%
	Urdu and English both	6.0%
	Vernaculars	39.8%

Table 1, (n=200).

Table 2: Average means and standard deviations of variables

Variables	Average means	SD
PPS	89.3200	11.06843
authveparenting	38.1850	4.43159
authoritarianparenting	26.0900	6.38008
permissiveparenting	21.2400	7.78237
Selfperprofile(Adjustment)	114.8750	16.15159
scholasticcompetence	19.3450	3.85490
socialcompetence	18.8450	3.38649
athleticcompetence	19.0800	3.66068
physicalappearance	19.6200	3.74778
behavioralconduct	18.0900	3.39700
Selfesteem	19.8950	3.66622
Resilience	54.8800	4.91185

Table 3: Correlations between perceived parenting styles

Variables	Correlation
Self-esteem	
Perceived Parenting Styles	-.205**
Authoritative parenting Style	.138
Authoritarian parenting Style	-.101
Permissive parenting Style	-.305**
Adjustment (self-perception profile)	
Perceived Parenting Styles	-.197**
Authoritative parenting Style	.167*
Authoritarian parenting Style	-.111
Permissive parenting Style	-.289**

Scholastic Competence (components of

Adjustment)

Perceived Parenting Styles	-.175*
Authoritative parenting Style	.142*
Authoritarian parenting Style	-.069
Permissive parenting Style	-.283**

Social Competence (components of

Adjustment)

Perceived Parenting Styles	-.078
Authoritative parenting Style	.099
Authoritarian parenting Style	-.054
Permissive parenting Style	-.111

Athletic Competence (components of

Adjustment)

Perceived Parenting Styles	-.123
Authoritative parenting Style	.199**
Authoritarian parenting Style	-.151*
Permissive parenting Style	-.153*

Physical Appearance (components of

Adjustment)

Perceived Parenting Style	-.117
Authoritative parenting Style	.139*
Authoritarian parenting Style	-.013
Permissive parenting Style	-.249**

Behavioral Conduct (components of

Adjustment)

Perceived Parenting Style	-.180*
Authoritative parenting Style	.016
Authoritarian parenting Style	-.111
Permissive parenting Style	-.175*

Resilience

Perceived Parenting Style	-.089
Authoritative parenting Style	.385**
Authoritarian parenting Style	-.311**
Permissive parenting Style	-.111

correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)
(n=200)

Table 4: Independent Sample t-test

	Males		Females				
Variables	M	SD	M	SD	t (198)	p	Hedges' g
PPS	88.5730	11.58554	89.9189	10.65077	-.854	.394	0.122
Authoritative Parenting style	38.1236	4.93554	38.2342	4.00444	-.175	.861	0.025
Authoritarian Parenting style	24.6517	4.84088	27.2432	7.20255	-2.908	.004	0.413613
Permissive Parenting Style	22.0225	7.35462	20.6126	8.08722	1.275	.204	-0.181
Self-esteem	20.3371	3.49006	19.5405	3.77981	1.532	.127	-0.218
Adjustment (Self-per p)	116.9551	15.40949	113.2072	16.60346	1.638	.103	-0.233
Scholastic Competence	19.5618	3.96563	19.1712	3.77281	.711	.478	-0.101
Social Comp-	19.2247	3.39369	18.5405	3.36502	1.424	.156	-0.203

40

etence

Athletic Comp-etence	19.9101	3.51503	18.4144	3.65431	2.926	.004	0.415887
Physical Appearance	19.6180	3.77945	19.6216	3.73936	-.007	.995	0.001
Behavioral Conduct	18.3034	3.46215	17.9189	3.34972	.795	.428	-0.113
Resilience	55.7416	4.29992	54.1892	5.27001	2.244	.026	0.319239

All four hypotheses are supported which indicate change in psychological correlates associated with perceived parenting styles. The study found the positive correlation between authoritative parenting style and psychological correlates and negative correlation with authoritarian and permissive parenting styles. Though some show statistically significant and other show insignificant hypothesized relationship between variables (see table 3). The findings indicate the perceived authoritative parenting as the most common style by the alpha children, as its mean score is greater than other two parenting styles (see table 2). The overall trend is evidently seen in all socioeconomic groups (low, middle, and upper) and children's age groups. The demographics do not seem to have any consequential impact on perceived parenting styles with the exception of adolescents' gender.

The mean value of authoritative parenting style across all age groups was approximately equal. A separate analysis for the socioeconomic strata indicated, the highest prevalence of authoritative parenting style across all three socioeconomic groups. Parental level of education did not influence the choice of parenting style. Nonetheless, gender of the child effected perceived parenting style by alpha children as they perceived it differently (see table 4). The mean score for authoritative parenting was almost same between males and females, however authoritarian

parenting was perceived more by girls than boys.

The findings are in line with the previous researches by Ishizuka, 2019; Parker, 2015), who found globalization mitigating effects of economic, social, generational and parenting styles. The intensive parenting culture has found acceptance by different socioeconomic and ethnicities. The obtained findings in our study allow us to conceive authoritative parenting style in every ethnicity, Socio-economic class and family system which is in conformity to various studies (Carson, Chowdhury, Perry, & Pati, 1999).

Our research question is partially answered by Osenweugwor (2016) if we limit it to authoritative parenting style.This suggest that authoritative parenting style is the most common trend in contemporary Pakistani household. An important dimension of authoritative parenting style is the level of social adjustment and autonomous living (Cardinali & D'Allura, 2007). The preponderance of authoritative parenting style in the culture of this city may be a pointer toward transformation of our society in some social change due to access of western and modern values via media, education, and gradual emphasis on individual values. The gene alpha seems to loose ties with authoritarian style of parenting and witnessing authoritative parenting style taking some shape.

The tendency to approach children in a democratic way is visible not only in Pakistan but all over the world .Particularly the change is seen in Asian countries such as India,Iran,and other Eastern countries who believed in conservative and collectivistic values earlier (Ghorbani ,2021;Pinquart & Kauser, 2018; Shechory-Bitton & Ben-David, 2014; Shechory-Bitton et al., 2015; Su & Chen, 2020; Yafe, 2020).According to Ghorbani and colleagues (2021), the essence of authoritative parenting style is felt globally and everywhere.

Speaking in term of gender, the alpha girls perceive their parenting style as based on authoritarianism than alpha boys. The findings are in accordance with previous researches (Shek, 2002; Zhang et al., 2006; Zakeri, Karimpour, 2011). The findings suggest that more restrictions and rigid rules of behavior are specified for

girls than boys in the culture of Pakistan. This finding is supported by the research findings reported by Zakeri & Karimpour (2011).The research found that girls experience more "behavioral strictness-supervision" for them than boys.

This seems plausible to assume that as far as alpha girls are concerned, parents have not stepped out of the collectivistic cultural effects. The difference between alpha girl and alpha boy for athletic competence, where boys outshining girls show many factors other than parenting styles to be associated with gender difference. Socioculturally speaking, the gender stereotypes, mostly in favor of boys bring more support and encouragement to boys' participation in sports. Also sports avenues attract and are available to boys than girls. Psychosocially, boy adolescents' self- perception of athletic competence motivate and encourage their confidence level to meet social standards. More role models and peer influence related to sports are available to boys than girls. The socialization goals adopted by parents to impact athletic competence are based on their parenting style besides gender roles and stereotypes. In this regard each parenting style behave differently to support athletic competence in both the genders. Parents adopt different dimensions of parenting to promote physical activity in their children (Spruijit,Decker,Ziermans,Swaab ,2018).Unconscious gender bias make parents to behave differently depending on child's gender (Bailey,2021).

Another significant difference found between alpha males and alpha female adolescents is related to resilience, in which mean value for males is high than females mean value. The outcome is in line with a number of researches (Stratta , 2013;Shehu & Mokgwathi, 2008; Ciarochi, Heaven ,2007).Females are found to be less resilient than males as they have more critical attitude toward self, experience peace in loneliness in face of some tragic event, have high intense emotions, and are less resilient (Neff ,2003).

Recommendations

Authoritative parenting style in Pakistan is a gradual and slow process, greatly influenced by media image than acquired conscious solution. However only further research can explore it in depth. There is a need for policy makers to educate parents for different parenting styles and the benefits attached with authoritative parenting style.

Perceived parenting styles are a major part which contribute to children's behavioral outcomes, however family dynamics and child temperament also play a significant role in it. These factors should be combined to have a more thorough understanding of children's developmental outcomes. A larger sample, using other methods than correlation to infer cause and effects, such as longitudinal or experimental design are suggested for future research.

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Virtual Escapism: Role of Introversion and Anxiety in Internet Gaming Addiction

Dominance

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ABSTRACT

This study is a correlational study aiming to evaluate the relationship between anxiety, introversion, and Internet Gaming Disorder (IGD). This study had a sample size of 59 participants gathered through volunteer sampling which consisted of 22 Females and 37 Males. Participants had to complete a questionnaire which included four measures. Demographic information form, Generalized Anxiety Disorder Scale-7 (GAD-7), Introversion Scale and Internet Gaming Disorder Scale-Short-Form (IGDS0-SF). Results showed a weak but statistically significant correlation (R=0.2) between Anxiety (GAD) and IGD and a statistically significant correlation (R=0.7) between Introversion and IGD. These findings suggest gaming can provide an escape and can serve as a coping mechanism for individuals with anxiety and socially safe and controlled environments for individuals with introverted personality traits.

Keywords

Internet Gaming Addiction, Introversion, Anxiety, Coping, Correlation

Introduction

As the usage and advancement of technology elevate, it could bring both benefits and drawbacks. While it can aid our daily lives by adding convenience in communication, gaining information and simply making our lives easier. While internet has many advantages, it also has a downside as it can decrease our control over the use of internet which could lead to internet addiction, which might affect our daily functioning and relationships with friends, families, and in turn, decrease our overall

emotional well-being. (Anderson, 2001; Lin & Tsai, 2002; Ryu, Choi, Seo, & Nam, 2004; Young & Rogers, 1998).

As video gaming is one aspect of technology, it also has both positive effects and negative effects. Even though playing video games is not considered problematic, but it can become pathological or problematic if it starts to disrupt daily life activities, and affecting an individual's social, occupational, academic and psychological functioning (Gentile et al., 2011). In general, "pathological gaming" can be described as persistent, recurrent, and excessive involvement with computer or video games that cannot be controlled, despite associated problems (Griffiths, 2005; Lemmens et al., 2009).

Internet Gaming Disorder (IGD)

Internet gaming disorder was first included in The Diagnostic and Statistical Manual of Mental Disorders in May 2013, and it is categorized in the addictive disorder category. IGD is considered to be very similar to gambling disorder, and it contains nine criteria. (A) preoccupation with Internet games; (B) withdrawal symptoms when Internet gaming is taken away; (C) tolerance, the need to spend increasing amounts of time engaged in Internet gaming; (D) unsuccessful attempts to control participation in Internet gaming; (E) loss of interest in hobbies and entertainment as a result of, and with the exception of, Internet gaming; (F) continued excessive use of Internet games despite knowledge of psychosocial problems; (G) deception of family members, therapists, or others regarding the amount of Internet gaming; (H) use of Internet gaming to escape or relieve a negative mood; and (I) loss of a significant relationship, job, or educational or career opportunity because of participation in Internet games. According to the DSM-V, an individual must exhibit five (or more) of these nine criteria in a 12-month period (Mihara & Higuchi, 2017). The prevalence of internet gaming disorder is about 0.7% to 27.5% and it is higher in the male population as compared to female population and it is higher in the younger than the older population (Petry

et al., 2014).

An interview study was done to test the diagnostic validity of the DSM-5, which showed positive results. (Ko et al., 2014) but it needs further research to cater to the on-going debates about its reliability and validity (Griffiths et al., 2016; Király, Griffiths, & Demetrovics, 2015; Kuss, Griffiths, & Pontes, 2017) and for it to be included as an independent disorder in the upcoming publications of the DSM.

Generalized anxiety disorder (GAD) and Internet Gaming Disorder (IGD)

GAD is indentified by excessive and persistent worrying and stress that is difficult to control and is often accompanied by physical sypomtoms such as insomnia, restlessness, muscle tension, and concentration problems. According to DSM-5, the symptoms must occuring for more days than not at least 6 months. General anxiety disorder is one of the most common mental disorders in the community and primary care facilities (Wittchen et al., 2002), with a 4%–7% lifetime prevalence and 1%–4% reported annual incidence (Hoge, Ivkovic, & Fricchione, 2012; Katzman et al., 2014). This disorder may also be associated with increased rates of substance abuse. Although studies have suggested that those with GAD are prone to addictive behaviors, such as alcohol abuse, to cope with their anxiety (Smith & Book, 2008, 2010; Smith & Randall, 2012), whether they have a manifestly increased risk for IGD has yet to be evaluated. Studies have shown a high comorbidity between Internet addiction and psychiatric disorders, especially affective disorders (e.g., depression) and anxiety disorders (e.g., GAD and social anxiety disorder) (Caplan, 2007; Cole & Griffiths, 2007; Lehenbauer-Baum et al., 2015; Morahan-Martin & Schumacher, 2003; Weinstein & Lejoyeux, 2010; Yen et al., 2012). However, whether IGD is comorbid with generalized anxiety disorder (GAD) has not been well studied. That is why this research has aimed to study the relationship between these two variables.

Introversion and Internet Gaming Disorder (IGD)

Personality is a special focus within Internet Addiction (IA) research (Montag et al., 2010). One of the main reasons for the focus on personality is the potential link between personality traits like extraversion and neuroticism and a predisposition for addiction (Grekin et al., 2006), such as IA (Dalbudak et al., 2013; Montag et al., 2010). Previous studies that used Eysenck Personality Questionnaire (EPQ) suggested a relationship between low extraversion (introversion) and IA (Ebeling-Witte et al., 2007; Dong et al., 2013; Yan et al., 2014). Moreover, among university students, high neuroticism predicted IA (Dong et al., 2013; Yan et al., 2014).

Literature Review

A study was done by Loton, D., Borkoles, E., Lubman, D. et al. To examine how coping functions as a mediator between mental health and one measure of video game addiction and participation. An online survey comprising the Approach/Avoidance Coping Questionnaire (BACQ), the Depression, Anxiety Stress Scale (DASS-21), and the Computer Addiction-Engagement Scale (CAES) was filled by 552 adult participants. The association between video game addiction and symptoms of stress, anxiety, and depression was found to be significantly explained by coping. However, a direct relationship persisted even after taking coping into consideration. Playing video games showed complete mediation and had no correlation with deteriorating mental health, with the exception of anxiousness. Resignation and disengagement are used more often than other coping mechanisms.

A study was done by James Daniel Bender to examine if time spent gaming, participants' interpersonal communication and introverted personality can affect the likelihood of facing symptoms of anxiety. This study had 82 males, and 46 females completed five measures including demographic form, interpersonal communication, social anxiety, problematic online gaming and introversion. Results showed social anxiety

and multiplayer online role-playing games, but it was found that interpersonal communication skills, problematic gaming, and introversion are all predictors of anxiety.

Rationale and Significance

This study aims to study the relationship between three variables which are: Internet Gaming Addiction, Anxiety, and Introversion. Firstly, this study will investigate the relationship between the severity of symptoms of Internet Gaming Disorder and symptoms of anxiety. Secondly, it will explore whether people with more introverted personality traits are more addicted to gaming or not.

Hypothesis

This study has 2 hypotheses, which are:

Firstly, Individuals with higher levels of anxiety are more likely to exhibit symptoms of Internet Gaming Disorder (IGD). This relationship arises because individuals with anxiety may use online gaming as a coping mechanism to escape from real-world stressors, leading to excessive and potentially problematic gaming behavior. The higher the anxiety level, the greater the likelihood of developing IGD symptoms. A study of South Korean participants found that an IGD risk group had significantly higher anxiety symptom scores (Kim et al., 2016). As anxiety symptoms are the core presentation of GAD, we hypothesize that GAD is associated with IGD.

Introverted individuals are more prone to developing Internet Gaming Disorder (IGD) compared to extroverted individuals. Introverts may find online gaming environments more appealing because these platforms allow for social interaction in a controlled and less intimidating way compared to face-to-face interactions. Consequently, introverts may become more immersed in gaming, increasing the risk of IGD.

Methodology

Research Design

Research design was a correlation between three variables (Internet gaming addiction, anxiety, and introversion). Data collection of the variables was done through surveys using google forms which comprised of closed ended questions that collected data quantitatively. Four measures were used in the study which were: Demographic information form, Internet Gaming Disorder Short Form Scale, Generalized Anxiety Disorder-7 scale and the introversion scale.

Participants

A criterion was mentioned at the start of the survey which stated that they should fill in this survey if they are a video gamer who plays on average 6 or more than 6 hours per week and if they have been playing for at least one year. This study had a total of 59 participants from the ages 18 to 36 with males being 62.7% and females being 37.3%. Participants were obtained through online volunteer sampling. The survey was made on google forms and was posted on several social media platforms such as Discord, Facebook and Instagram. Surveys were filled out anonymously and voluntarily to prevent social desirability and demand characteristics.

Inclusivity criteria

Participants who played video games for an average of at least 6 to 7 hours, have been playing for at least 12 months, and were between the age of 11 to 40.

Exclusivity criteria

Participants who do not play video games for at least an average of 6 hours are below the age of 11 and above the age of 40 and those who have been playing for less than 12 months.

Measures

Demographic Form

Participants were asked to fill out the demographic form which included: (a) their age, (b) their gender, (c) number of hours they play in a week on average (6 to 14, 15 to ....), (d) years they have been playing for, (e) their number of siblings and (f) their birth order. (c) and (d) were included so that we could check if the participants meet the criteria to be in this research.

Generalized Anxiety 7 Scale

The Generalized Anxiety Disorder (GAD-7) questionnaire is a seven-point self-report questionnaire designed to assess patients' health status over the past two weeks. Items ask to what extent the patient has been concerned by feeling nervous, anxious or on edge, not being able to stop or control concerns, worrying too much about different things, having trouble relaxing, being so unable to sit down, easily annoyed or irritated and feeling afraid that something might happen. The mean of the GAD scale was 9.57 and standard deviation was 5.21. A study was done to test the reliability, construct validity, and factorial validity of the GAD-7 in the general population and to collect normative data. Sample of this study included 5030 subjects and results showed that internal consistency was identical across all subgroups (α = 0.89). Intercorrelations with scales such as the PHQ-2 and the Rosenberg Self-Esteem Scale were $r = 0.64$ ($P < 0.001$) and $r = -0.43$ ($P < 0.001$), respectively. As expected, women had significantly higher mean (SD) GAD-7 anxiety scores compared with men [3.2 (3.5) vs. 2.7 (3.2); $P < 0.001$]. Normative data for the GAD-7 were generated for both genders and different age levels. Approximately 5% of subjects had GAD-7 scores of 10 or greater, and 1% had GAD-7 scores of 15 or greater.

Internet Gaming Disorder Scale- Short-Form

This Internet Gaming Disorder Scale-Short-form (IGDS9-SF) was developed by Pontes and Griffiths, 205. The questions on this scale ask participants about their gaming activity during the last 12 months. In this scale gaming activity has been defined as any game that has been played from a computer/laptop or from a gaming console or any other device (e.g., mobile phone, tablet, etc) both online and/or offline. This scale contains 9 items on a 5-point Likert type scale (Never, Rarely, Sometimes, Often, Very Often). Some items in this questionnaire are: Do you feel preoccupied with your gaming behavior? Do you systematically fail when trying to control or cease your gaming activity? and have you continued your gaming activity despite knowing it was causing problems between you and other people? Calculation of the scores of this scale is done by summing up all responses given to all the questions which can range from a minimum of 9 points and a maximum of 45 points. The higher scores indicate a higher degree of Internet Gaming Disorder. Participants who have answered at least five out of nine items as '5: Very Often' will meet the criteria of disordered gamers and participants who have not met the criteria would be considered non-disordered gamers. The mean of IGD was 21.89 and standard deviation was 6.09.

Introversion Scale

This scale was developed by McCroskey. This scale aims to measure introversion without the contamination of communication apprehension as previous literature has shown that items were also tapping into communication apprehension. Items on this scale have been drawn by the work of Eysenck. This scale contains 18 items which have to be rated on a 5-point Likert type scale ranging from 1 being Strongly Disagree to 5 being Strongly Agree. Total of these items can come up to a total of 12 to 60. Firstly, scores of items 1 and 4 are calculated than total of items 2,5,7,8,10,11,13,14,16 and 18 are calculated. Then a formula is applied (Introversion= 12- Total from step 1 + Total from step 2). Items 3,6,9,12,15 and 17 are not scored. The mean of the introversion scale came out to 59.5 and standard deviation 11.88. The reliability and

validity of this study have also been tested. The correlations of this measure with the PRCA-24 have been around .30. Alpha reliability estimates have been above .80.

Demographic characteristics of participants

Variable	f	%
Gender:		
Male	37	62.7%
Female	22	37.3%
Total	59	100%
Age:		
18 years	9	15.25%
19 years	7	11.86%
20 years	13	22.03%
21 years	18	30.5%
22 years	7	11.86%
23 years	2	3.38%
25 years	1	1.69%
26 years	1	1.69%
36 years	1	1.69%
Total	59	100%

Table 1 shows the frequency distribution and percentages of the demographic characteristics, such as gender, and age of the participants that were part of the study. Approximately, 62.7% of the current study's sample included males, with a 37.3% ratio of females. Most of the participants were 21 years old, followed by 20 year olds.

Ethical Consideration

To ensure all ethical guidelines were followed by our current research, a consent form was filled out by all subjects at the very beginning of the study to obtain their valid approval, for their data to be used in the study for research purposes only. Firstly, the participants were made aware of the nature of the study. They were introduced to the researcher, as a student of Bahria University, Institute of Professional Psychology of 5th Semester, and the partial intent of the study (as to not give

away the entire aim as to reduce effects of demand characteristics/social desirability). They were told that the aim of the study was to investigate: The Effect of Video Gaming on Behavior. Participants had the right to withdraw at any time while filling in the survey and were told that their participation was on a voluntary basis, and they reserved the right to leave anytime, i.e. exit the survey form. They were also guaranteed that their confidentiality would be maintained, and none of their real identifiable qualities would be published anywhere, as the names of the participants were not asked to begin with. They were told beforehand that it would take them 10 – 12 minutes to fill out the survey. By the end of the survey form an ending note was attached to thank them for giving us their time and data. They were given an email address to contact if they had any queries or wanted updates of any kind as well as reassured regarding the privacy of their

Procedure

This research was done under the supervision of Dr. Faiz Rasool, course instructor of Deviant Behavior course at Bahria University. The research process of this study started with a literature review keeping in mind three variables which were to be tested in this study (Internet Gaming Disorder, Anxiety and Introversion). After conducting an extended literature review, appropriate scales for measuring our variables were searched. Our three measures (Internet Gaming Disorder Scale-Short-Form, Generalized Anxiety Scale-7 and Introversion scale), a demographic information form and a consent form were included in the survey which was made using Google Forms. The aim of our study was explained at the end of our study. The consent form was the first part of our survey keeping in mind ethical considerations. The degree of IGD was operationalized as the scores of the IGDS9-SF. The severity of generalized anxiety was operationalized by the scores of GAD-7 and the level of introversion was operationalized by the scores on the Introversion scale. Scores of all these scales were calculated for all participants individually then scores of all 3 scales were summed and correlations were calculated between the total score of Introversion and

total scores of IGDS9-SF and total scores GAD-7 and total scores of IGDS9-SF using Pearsons' correlation.

Results

To test the first and second hypothesis, Pearsons's correlation was used. Results indicated that there was a weakly significant correlation (R=0.2) between GAD (Generalized Anxiety Disorder) and IGD (Internet Gaming Disorder) and there was a strong correlation between IGD and introversion (R=0.7).

Discussion

A study by Wang et al. Was the first to prove the positive association between IGD and GAD and that the participants with IGD are more likely to be comorbid with those who have GAD than those without GAD. Furthermore, subjects with IGD had higher anxiety symptoms, suggesting that subjects with IGD had not only high anxiety symptoms but also a higher risk of comorbidity with GAD. Multiple studies have shown that participants with high anxiety play video games as a coping mechanism. "Coping" or "escape" can act as motivators (Kim et al., 2016). A study which used the Internet Motive Questionnaire for Adolescents demonstrated that coping is an important factor from the increased gaming use in the participants with IGD (Bischof-Kastner, Kuntsche, & Wolstein, 2014).

Individuals play video games to escape from real life to get into a virtual world to forget about their worries of real life and without an effectual intervention for anxiety, online gaming could sharply increase and ultimately lead to an increased risk of online gaming addiction (Newman, Llera, Erickson, Przeworski, & Castonguay, 2013). Furthermore, increased online gaming could lead to impairments in the academic or social aspects of their lives, which could then again increase their worry and in turn increase gaming activity. A study by Kiraly and Urban et al. showed that due to the negative effect of comorbid disorder on the course of addictive disorder,

more attention should be paid to subjects with GAD when treating individuals with IGD to prevent this vicious cycle.

Many studies have been done to explore personality traits such as introversion and extroversion as risk factors for developing IGD but there have been inconsistent results (e.g., Allison et al., 2006; Caplan, Williams, & Yee, 2009; Mehroof & Griffiths, 2010; Park et al., 2011; Yao et al., 2015). A study by Peters and Malesky (2008) reported low extraversion levels among internet gamers with problematic gaming behavior, as introverted individuals seek to avoid social situations and resort to gaming to socialize in a controlled manner and a safer social situation. Caplan et al. (2009) examined introversion and found results consistent with the literature, in that introversion was associated with gamers exhibiting problematic gaming behavior.

Implications

As they may be more likely to use gaming as an escape mechanism, mental health practitioners can create therapeutic approaches aimed at introverts or people with anxiety. Clinicians may use anxiety and introversion as markers to determine a client's risk of developing a gaming addiction and to take early action. Treatment strategies may need to address both anxiety and gaming addiction at the same time because they frequently overlap.

Gaming may offer introverts a safe, stress-free setting for socializing or managing their emotions. Gaming may provide an escape from the stresses of the real world for people who suffer from anxiety. An excessive dependence on gaming as a coping mechanism may exacerbate introversion or anxiety by increasing social isolation and decreasing in-person interaction.

Recognizing that excessive gaming may be a coping method, parents should keep an eye out for symptoms in children who are shy or prone to anxiety. Promoting structured social activities or other pastimes can assist

introverted or nervous people in finding more constructive ways to interact and cope. Instructors may spot signs of gaming addiction in students who are anxious or introverted and offer resources or support connections.

Limitations

This study measured correlation using four scales which were self-reports. This could mean that their responses could be distorted due to social desirability or just not wanting to reveal their feelings or thoughts. It is possible that participants were not completely honest when completing the questionnaire. However, measures were taken to reduce this such as not completely revealing the aim of the study and they were not required to give their names.

Secondly, the sample size of this study was small, which could have affected the findings and decreased the generalizability and increased the risk of individual differences in explaining the results. Also, the frequency of female participants was much lower (n=22) which makes it difficult to generalize to the entire female population.

Lastly, GAD and IGD are disorders included in the Diagnostic and Statistical Manual of Mental Disorders and they should be diagnosed by a professional after properly evaluating the symptoms or if they meet the criteria or not.

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Future Recommendations

To generalize results to a wider population of gamers, a larger sample size with an equal distribution of males and females is recommended. The current variables of the study should be measured in a controlled laboratory setting to avoid self-reporting and potentially invalid socially acceptable responses. Establishing causation improves the validity and test-retest reliability of research and outcomes, including ours.

Our study collected largely quantitative data through closed-ended questions with limited responses, making it difficult to understand why some individuals made certain decisions. Answering the Ultimate Question: Why a certain Behavior. Future studies can look into what might have happened. Improve qualitative questions by asking open-ended questions that allow participants to explain their choices, allowing for inference rather than assumption. If this occurs, we will have a better understanding of what aspects of violent games trigger aggressive behavior in gamer personalities and real-life situations.

Conclusion

This study found a strong link between introversion, anxiety, and internet gaming disorder, stressing the vulnerability of introverted people with high anxiety levels to gaming addiction. These findings add to the literature on behavioral addiction by revealing psychological characteristics that may predispose some people to IGD. The study emphasizes the importance of integrated approaches that treat both mental health and gaming activities. We can help those at risk of developing IGD by encouraging healthy coping techniques and raising knowledge of these risk factors.

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Appendix

Introversion Scale

This introversion scale was developed by McCroskey to be distinct from measures of communication apprehension. An examination of the literature on introversion indicated that other introversions scales have included items that were tapping apprehension about communication. Items were drawn from the work of Eysenck, with items which referenced communication excluded. This permits the measurement of introversion without the contamination of communication apprehension items and allows the examination of both introversion and communication apprehension as predictors of communication behaviors independently of each other. The correlations of this measure with the PRCA-24 have been around .30. Alpha reliability estimates have been above .80. Items to measure neuroticism are used as filler items and are not scored with the introversion items.

DIRECTIONS: Below are eighteen statements that people sometimes make about themselves. Please indicate whether or not you believe each statement applies to you by marking whether you:

Strongly Disagree = 1; Disagree 2; are undecided =3; Agree = 4; Strongly Agree = 5

_____1. Are you inclined to keep in the background on social occasions?

_____2. Do you like to mix socially with people?

_____3. Do you sometimes feel happy, sometimes depressed, without any apparent reason?

_____4. Are you inclined to limit your acquaintances to a select few?

_____5. Do you like to have many social engagements?

_____6. Do you have frequent ups and downs in mood, either with or without apparent cause?

_____7. Would you rate yourself as a happy-go-lucky individual?

_____8. Can you usually let yourself go and have a good time at a party?

_____9. Are you inclined to be moody?

_____10. Would you be very unhappy if you were prevented from making numerous social contacts?

_____11. Do you usually take the initiative in making new friends?

_____12. Does your mind often wander while you are trying to concentrate?

_____13. Do you like to play pranks upon others?

_____14. Are you usually a "good mixer?"

_____15. Are you sometimes bubbling over with energy and sometimes very sluggish?

_____16. Do you often "have the time of your life" at social affairs?

_____17. Are you frequently "lost in thought" even when you should be taking part in a conversation?

_____18. Do you derive more satisfaction from social activities than from anything else?

Scoring: To determine your score on the Introversion Scale, complete the following steps:

Step 1. Add scores for items 1 & 4

Internet Gaming Disorder Scale–Short-Form (IGDS9-SF) (Pontes & Griffiths, 2015)

Instructions: These questions will ask you about your gaming activity during the past year (i.e., last 12 months). By gaming activity we understand any gaming-related activity that has been played either from a computer/laptop or from a gaming console or any other kind of device (e.g., mobile phone, tablet, etc.) both online and/or offline.

	Never	Rarely	Sometimes	Often	Very Often
1. Do you feel preoccupied with your gaming behavior? (Some examples: Do you think about previous gaming activity or anticipate the next gaming session? Do you think gaming has become the dominant activity in your daily life?)	○	○	○	○	○
2. Do you feel more irritability, anxiety or even sadness when you try to either reduce or stop your gaming activity?	○	○	○	○	○
3. Do you feel the need to spend increasing amount of time engaged gaming in order to achieve satisfaction or pleasure?	○	○	○	○	○
4. Do you systematically fail when trying to control or cease your gaming activity?	○	○	○	○	○
5. Have you lost interests in previous hobbies and other entertainment activities as a result of your engagement with the game?	○	○	○	○	○
6. Have you continued your gaming activity despite knowing it was causing problems between you and other people?	○	○	○	○	○
7. Have you deceived any of your family members, therapists or others because the amount of your gaming activity?	○	○	○	○	○
8. Do you play in order to temporarily escape or relieve a negative mood (e.g., helplessness, guilt, anxiety)?	○	○	○	○	○
9. Have you jeopardized or lost an important relationship, job or an educational or career opportunity because of your gaming activity?	○	○	○	○	○

Scoring information:

Total scores can be obtained by summing up all responses given to all nine items of the IGDS9-SF and can range from a minimum of 9 to a maximum of 45 points, with higher scores being indicative of a higher degree of Internet Gaming Disorder. In order to differentiate disordered gamers from non-disordered gamers, researchers should check if participants have endorsed at least five criteria out of the nine by taking into account answers as '5: Very Often', which translates as endorsement of the criterion.

References:

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In this part of the questionnaire you have to answer that over the last two weeks, how often have you been bothered by the following problems?

You have to answer the following questions on the scale of 0 to 3.

0 = Not at all
1 = Several days
2 = More than half of the days
3 = Nearly every day

Feeling nervous, anxious, or on edge *

	0	1	2	3	
Not at all	○	○	○	○	Nearly every day

Not being able to stop or control worrying *

	0	1	2	3	
Not at all	○	○	○	○	Nearly every day

Worrying too much about different things *

	0	1	2	3	
Not at all	○	○	○	○	Nearly every day

Trouble relaxing *

	0	1	2	3	
Not at all	○	○	○	○	Nearly every day

Being so restless that it is hard to sit still *

	0	1	2	3	
Not at all	○	○	○	○	Nearly every day

Becoming easily annoyed or irritable *

	0	1	2	3	
Not at all	○	○	○	○	Nearly every day

Feeling afraid, as if something awful might happen *

	0	1	2	3	
Not at all	○	○	○	○	Nearly every day

Demographic form

B *I* <u>U</u> ⊝ X̶

Description (optional)

Age *

Short-answer text

Gender *

○ Male

○ Female

○ Other

For how many years have you been playing video games? *

Short-answer text

Approximately, on average how many hours do you spend gaming per week?

○ 6-14

○ 15-28

Consent Form

B *I* <u>U</u> ⊝ X̶

Description (optional)

I agree to participate in the research. I have understood the purpose and nature of this research and I confirm I have a right to withdraw at any time.

○ Yes

○ No

Approximately, on average how many hours do you spend gaming per week?

○ 6-14

○ 15-28

○ 29-40

○ Other...

Number of siblings

Short-answer text

Birth Order

○ 1st Child

○ 2nd Child

○ 3rd Child

○ 4th Child

○ Only Child

Effects of video gaming

B *I* U̲ ⊖ ✗

It is requested that this page must be read carefully.

I, Student of Bahria University, Institute of Professional Psychology of 5th Semester are conducting a correlational study on "The Effect of Video Gaming on behavior". I would request for your participation in our study if you are a gamer. Your participation in this research is completely voluntary and you have the right to withdraw at any time. All personal information will be kept confidential, and the results will be used without mentioning names.

You are required to fill a demographic form and a questionnaire which takes approximately 10-12 minutes.

Thankyou for giving us your time and information to further our academic endeavors.

The Role of Positive Masculinity in Economic Participation of Women

Dominance

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ABSTRACT

The role of women in development is essential. Research and existing literature consistently demonstrate that women are at the intersection of economic advancement and the enhancement of a nation's living standards. Women's involvement in economic or wage-earning activities has a direct and positive impact on social standards and literacy rates within a country. Women who are knowledgeable about the job market and socially engaged are better equipped to make informed decisions for future generations, effectively manage family resources, and drive significant societal change.

To explore the situation of the role of positive masculinity in economic participation of women, a research study conducted in the Mirpurkhas district, the research investigates the factors that support or hinder women's economic participation. Data was collected through simple random sampling and analyzed with MS Excel. The findings reveal that positive masculinity significantly contributes to women's economic engagement, with 83.3% of women receiving family support and aspiring to entrepreneurship. However, the study also highlights critical challenges, including a high percentage of uneducated women in labor, barriers faced by educated women in the job market, and issues related to gender inequality and harassment. The results underscore the need for updated policies that foster women's economic empowerment and address these barriers, paving the way for a more inclusive and supportive environment for women's economic growth.

Key words: *Positive Masculinity, Economic Participation, Gender Equality, Race, Ethnicity, Legal Policies*

Introduction

Kiselica and Englar-Carlson (2010) define positive masculinity as the endorsement of traditional masculine norms that lead to beneficial outcomes, such as being a responsible father, working diligently, and providing for one's family, while rejecting harmful behaviors like aggression and emotional suppression. Seidler et al. (2016) expand on this concept by describing positive masculinity as a reimagining of masculinity that incorporates traditionally feminine traits, such as empathy, emotional expression, and caregiving, while preserving the positive aspects of traditional masculinity, including courage, responsibility, and resilience. Wong et al. (2017) further emphasize that positive masculinity focuses on the constructive and adaptive elements of masculine identity, promoting both individual and communal well-being by balancing traits like strength, protectiveness, and assertiveness.

Eversole, R., (2012). Remarked Participation has deep and historical background in field of social development, considered as alternative grassroots in development in 1960 and 1970 and the participation remained an important subject in development process, increase in communities and policy determinations. G.M et al, (2015) stated that Participation has been viewed as a process of development because through which new skills, knowledge and attitude is transfer to the peoples, participation can make capacity of the society to solve the issues, in the community development the participation always remained the strongest advocate, because they think the participation is crucial and makes positive conditions in economic development and social development.

Likewise, women's economic participation plays a pivotal role in society. Beyond their reproductive duties, women also impart essential values and standards of

living to their children, helping shape them into responsible citizens. Historically, women have shouldered dual responsibilities, often facing significant challenges including religious, societal, cultural, and familial restrictions. While some of these restrictions may be perceived as protective in traditional and impoverished societies, they often stand in opposition to international standards of women's empowerment and gender equality. As FAO and Afzal (2009) emphasized, there is an urgent need for targeted policies to address the needs of rural women. The lack of effective policies in countries like Bangladesh, India, Sri Lanka, and Nepal highlights the necessity for international agencies and NGOs to take affirmative action. Developing and implementing policies that facilitate women's full participation in social and economic spheres is crucial for fostering gender equality and economic inclusion.

Shoba (2010) highlights that women are central to both the processes of childbirth and economic production, making them critical to efforts aimed at economic empowerment and improving living standards. Women, particularly in their dual roles, are often the most vulnerable, bearing the greatest burden and requiring strong support and integration. In the rural areas, women struggle to meet necessities, frequently facing higher mortality rates, food insecurity, lack of access to higher education, and employment discrimination. However, by engaging in economic activities, women can enhance their self-esteem, achieve financial stability, and help eradicate poverty.

Hundersama (2013) observed that in many societies, domestic responsibilities fall on women. Although some women receive financial support from their husbands, they often lack substantial assistance with household tasks. As a result, working women are burdened with both paid and unpaid duties.

Bolis et al. (2020) found that during the COVID-19 pandemic, the global need for care work became more pronounced, with men increasingly participating in caregiving roles. An Oxfam study conducted in 2020 revealed significant increases in male involvement in care work in countries such as Kenya (79%), the Philippines

(65%), the USA (64%), the UK (36%), and Canada (36%).

Spronk (2022) suggests that this trend indicates a growing potential for men to share domestic responsibilities more equitably. This study aims to examine positive male figures who not only contribute to household duties but also support women in achieving economic independence and participating in all economic activities. The research further proposes effective policies and amendments to promote gender equality.

From the guidance of the literature and international studies the author has observed that the positive masculinity is a strong connection of standardize the life of a working women which are bearing the load of dual domestic and professional duties it also helps those females who are suffering from societal pressure, religious and feminine traits which bounds them to stay at home specially in under developing countries like Pakistan where no such type of work is done before so there is urgent need of investigate and suggest some supportive and updated policies to the stake holders and agencies which are working for the women empowerment and indicate the ground level issue of such area where participation of women in societal and wage earning activities is not widely accepted.

This study also aims to provide valuable insights into how positive masculinity can enhance gender dynamics and bolster women's economic empowerment, thereby contributing to more equitable and inclusive economic development. By addressing these objectives, the research seeks to identify actionable strategies that promote gender equality and foster a supportive environment for women's active participation in the economy.

Objective

- To assess the correlation between positive masculinity and support for women's economic empowerment initiative.

- To propose actionable recommendations for organizations and policymakers to leverage positive masculinity in fostering women's economic inclusion.

Research question

- How positive masculinity support women to become economically empowered?
- What is the relation of positive masculinity with the other factors like socio-economic status, race, and ethnicity?
- What policies proposal can be suggested for women's empowerment. Is there any need for abandonment?

Literature review

Goldin, Claudia, (1994). stated that a small portion of women economic participation as labor force is observed in an economic transaction from agricultural to industrial economy. its due to change in small scale production at domestic level and bulk production in Industries. Females, who are mostly uneducated or having lower education, confront a shortage of labor at home and are hesitant to work as in non-agricultural and manual labor force. Although, economic wealth of home rises, and women's level of education increases, as more women's are entering in job market, on-manual and service-oriented positions that's why, the women's economic participation rate as a labor force is pro rate is expected to U-shaped in relation to economic growth.

Afzal et al. (2009) emphasized the importance of empowering rural women to elevate their social status, advocating for their recognition as valuable contributors to the workforce and for ensuring they have opportunities to work in safe and healthy environments.

Duta (2010) examined individuals living in extreme poverty, noting that despite their hard work, they often

remain trapped in chronic poverty due to limited opportunities for income growth.

The World Bank (2011) reported that women who control their own income are more likely to invest in their children's education, thereby ensuring that both daughters and sons receive schooling.

Naz et al. (2011) identified socio-cultural, economic, and political participation as critical areas for women to achieve economic independence, effectively manage their households, and become socially and economically self-sufficient.

Sanghi et al (2015) Stated that with the increase in household income levels, a woman no more enjoys working as a non-paid worker, a helper, or a conditional worker unless the work is financially rewarding (as in MGNREGA). In rural area of India, when, when these chances are less, that's why, females are unable to find profession regarding their choice (regular part-time jobs close to their households). In addition, work is restricted for unskilled labor in non-farm sector. These causes may have contributed to the exodus of women from the workforce.

Spronk et al. (2022) observed that as women enter the paid workforce to gain economic empowerment, they often face the dual burden of paid and unpaid labor, with their responsibilities for caregiving and reproductive work remaining largely unchanged. The study also highlighted the intersectional discrimination women face based on gender, race, ethnicity, citizenship status, class, and socioeconomic position. While the contribution of men to unpaid care work has slightly increased, the international labor Organization (ILO) reported in 2018 that this shift has only marginally reduced the gap, by an average of seven minutes between 1997 and 2012.

During the COVID-19 pandemic, Spronk et al. (2022) found that girls were disproportionately affected, losing their jobs at higher rates and spending more time on household work compared to boys.

Wyvine Ansima Bapolisi (2024) argued for the implementation of policies that directly impact women's lives, reduce the dual burden of household duties and employment, improve food security, and contribute to the

well-being of future generations in terms of health, mental well-being, and educational attainment.

Methodology

This research employs a mixed-methods approach, integrating both quantitative and qualitative data collection techniques to provide a comprehensive understanding of positive masculinity and women's economic participation. The study also examines the societal norms, values, beliefs, restrictions, and traditional traits that influence these dynamics. A structured questionnaire was developed, and five villages in district: Mirpurkhas, Taluka: Sujja Abad, and UC: Makhan Samoon were selected for interviews and data collection to accurately assess the situation. Through this methodology, 31 interviews were conducted, comprising 18 females and 13 males from various age groups, believes, and back grounds include Relogious leaders, community leaders, heads of families and workers were interviewed the selection of those all respondent were selected on the base of their education level and working experience in both agricultural, industrial and religious those persons were also interviewed which were not familiar with masculinity and did not undergo any test or trainings to know difference of thinking style and to calculate the relationship between masculinity and women empowerment when female respondents were selected on the base of their role in societies which include working, entrepreneur, social worker, house wives, labor, divorced, civil servants, health workers, and students information was compiled and updated in MS Excel, where it was thoroughly analyzed, and the results were subsequently published.

Findings and Discussion

Demographic status of study area

Table-1(Area, Population By Sex, Sex Ratio, Population Density, Urbanproportion, Hosueholdsizeandannual Growth Rate)

| ADMN- UNIT | AREA(SQ.KM.) | POPULATION2017(census) | | | | | | | | POPULATION 1998 | 1998-2017 AVERAGE ANNUAL GROWTH RATE |
		ALL SEXES	MALE	FEMALE	TRANSGENDER	SEX RATIO	POPULATION DENSITY/S.Q.K.M	URBAN PROPORTION	AVERAGE HOUSEHOLD SIZE		
1	2	3	4	5	6	7	8	9	10	11	12

SINDH

SINDH	140,914	47,854,510	24,876,186	22,972,370	5,954	108.29	339.60	51.89	5.55	30,439,893	2.41
RURAL		23,021,876	11,927,892	11,091,837	2,147	107.54			5.47	15,600,031	2.07
URBAN		24,832,634	12,948,294	11,880,533	3,807	108.99			5.62	14,839,862	2.74
MIRPURKHAS DIVISION	28,170	4,224,945	2,213,634	2,010,774	537	110.09	149.98	19.18	5.27	2,585,417	2.61
RURAL		3,414,793	1,792,654	1,621,743	396	110.54			5.28	2,133,951	2.50
URBAN		810,152	420,980	389,031	141	108.21			5.22	451,466	3.12
MIRPURKHAS DISTRICT	2,925	1,504,440	776,146	728,071	223	106.60	514.34	28.85	5.25	1,006,329	2.13
RURAL		1,070,359	552,828	517,368	163	106.85			5.15	706,154	2.21
URBAN		434,081	223,318	210,703	60	105.99			5.52	300,175	1.96

languages are also spoken there like tribal Dhatki. Majority of people are engaged in agriculture and labor force work
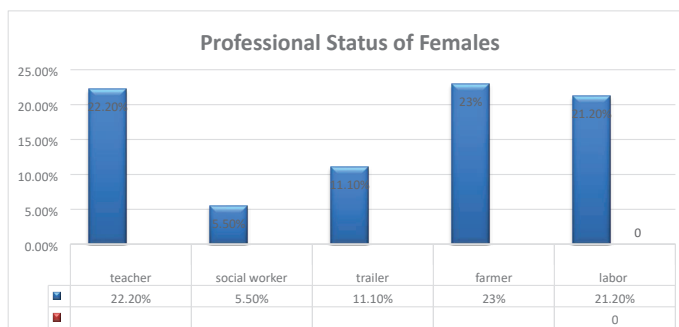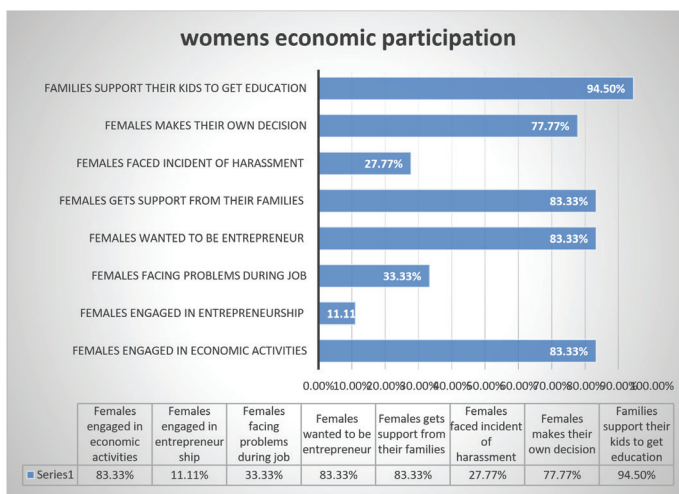
Demographic Findings
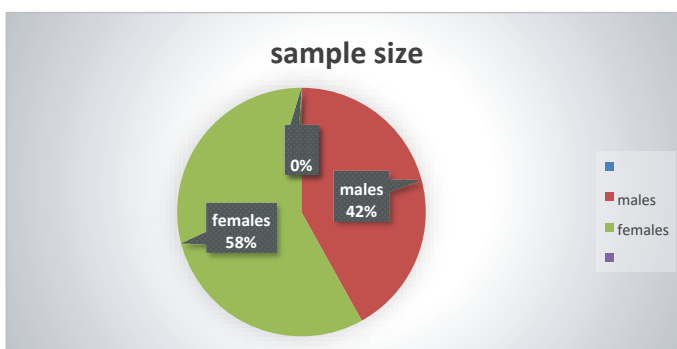
This table presents the total number of respondents, with the majority being female, accounting for 58% of the sample, while the remaining 42% were male.

literacy level

	un-educated	primary	secondary	matriculation	intermediate	bachlors	masters
females	11	1	1			1	4
mles	4	2		1	1	3	2
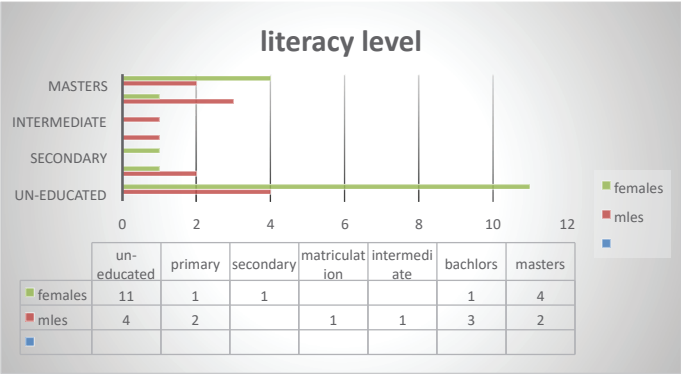
This table outlines the educational levels of the respondents, revealing that the majority were uneducated, including 11 females and 4 males. Among the educated respondents, 1 female and 2 males had completed primary education, 1 female had completed secondary education, and 1 male had completed matriculation. Additionally, 1 male had completed intermediate education, while 1 female and 3 males held bachelor's degrees. Furthermore, 4 females and 2 males had attained master's degrees.

Age groups

|	20-30	30-40	40-50	50 above
females	8	7	3	
males	6	1	4	2
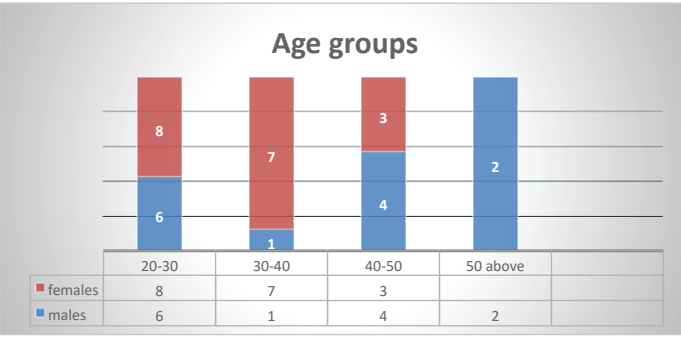
This chart explains the age distribution of the respondents. In the 20 to 30-year age range, there are 8 females and 6 males. The 30 to 40-year range includes 7 females and 1 male. For the 40 to 50-year range, there are 3 females and 4 males. In the age group above 50 years, there are 2 males.

womens economic participation

	Females engaged in economic activities	Females engaged in entrepreneur ship	Females facing problems during job	Females wanted to be entrepreneur	Females gets support from their families	Females faced incident of harassment	Females makes their own decision	Families support their kids to get education
Series1	83.33%	11.11%	33.33%	83.33%	83.33%	27.77%	77.77%	94.50%

FAMILIES SUPPORT THEIR KIDS TO GET EDUCATION — 94.50%
FEMALES MAKES THEIR OWN DECISION — 77.77%
FEMALES FACED INCIDENT OF HARASSMENT — 27.77%
FEMALES GETS SUPPORT FROM THEIR FAMILIES — 83.33%
FEMALES WANTED TO BE ENTREPRENEUR — 83.33%
FEMALES FACING PROBLEMS DURING JOB — 33.33%
FEMALES ENGAGED IN ENTREPRENEURSHIP — 11.11
FEMALES ENGAGED IN ECONOMIC ACTIVITIES — 83.33%

Professional Status of Females

	teacher	social worker	trailer	farmer	labor
	22.20%	5.50%	11.10%	23%	21.20%
					0

These tables shows that the 94.50% of women's supports their family and their kids to participate in educational economy , where as 77.77% women's are participated in individual decision making and self-dependent, when 83.33% getting supportive environment from their families and those all are supporting their families economically and wanted to be entrepreneur in their life,11.11% women's are doing enterprenurship,22.20% are teachers,5.5% are social workers working in different NGOs, 23% are famers and 21.2% are doing labor jobs when 33.33% women's facing problems in job market when 27.77% women's are victim of harassment. The majority of victims of harassment are Muslims and belongs to sheikh families while few of non-Muslims like thakur and Cristian are also facing these incidents when the trend of higher job and properties is distributed among leading religious like Cristian and Muslims families

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caused by higher education and majority in these areas, females belong to minority casts are discriminated on the base of religious and gender issues cause of different believes and cultural attributes among the society but these all things are neglected in schools where all Muslims and non- Muslims have equal chances of doing their studies.
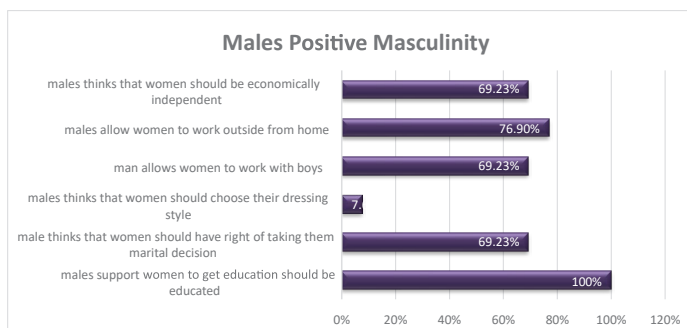
This table shows the rate of positive masculinity of males, it indicates that 69.23% are in fever of women empowerment, thinks that women can take their marital decision and allows women to work with boys, 100% of males are in favor of education, when 76.90% males allow women to work outside and only
7.60% males thinks that women can choose their dressing style.

Descriptive Findings

The research provides a nuanced and comprehensive analysis of gender dynamics, economic participation, and societal constraints within a traditional and religious context.

A significant number of females are actively engaged in economic activities (83.33%); however, many are confined to low-wage, labor-intensive roles, particularly in agriculture. This is compounded by widespread illiteracy and limited educational attainment, which restrict job opportunities and perpetuate economic dependency. The gap between high entrepreneurial interest (83.33%) and low actual engagement (11.11%) highlights a disparity between potential and practical

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females, while participating in various economic activities, generally occupy less labor-intensive roles and facing difficulties compared to male, while males' supportive roles within family settings represent a positive aspect of masculinity

Rigid traditional and religious beliefs significantly restrict women's autonomy. Perceived as weaker and less

Challenges and opportunities

Women encounter significant challenges, including harassment and job-related difficulties. Women's who receive robust family support are notably motivated to pursue entrepreneurship, demonstrating a positive correlation between familial backing and entrepreneurial ambitions.

There is a positive trend in family support for both education and economic participation among females, with high levels of support reported (94.5% for education and 83.33% for economic participation). Women who receive support from their families show a strong inclination towards entrepreneurship, indicating that family backing significantly enhances their entrepreneurial aspirations.

The societal structure reveals a complex interplay between traditional beliefs, economic limitations, and

evolving gender roles. Although there is notable progress in family support and some movement towards more inclusive gender roles, entrenched cultural norms and economic constraints continue to limit women's full potential (Golden, 2006). Addressing these challenges requires a comprehensive approach that includes improving educational access, expanding economic opportunities, and enacting cultural reforms to ensure greater autonomy and empowerment for women (Inglehart, R., & Norris, P., 2003; Sen, 1999).

Recommendations

- Expand educational initiatives and resources, particularly in rural areas, to enhance literacy rates and provide opportunities for the girls / women's. This should include support for adult education and vocational training on entrepreneurships, legal policies, gender-based violence and societal issues and religious believes for both women and men.

- Develop programs that support female entrepreneurship by providing access to microfinance, business training, and mentorship. Create platforms for women to network and collaborate on business ventures and set a market where females can sale their domestic products like handicrafts and sale their products on social media.

- Facilitate job creation and skill development in agriculture like value addition, organic farming, dairy farming and kitchen guarding etc. And in industrial sectors like sport, food, medicine etc. Promote innovative initiatives and local businesses which are producing good unique products.

- Initiate community awareness campaigns to address and challenge rigid traditional and religious norms that restrict women's autonomy. Promote gender equality through media, educational programs, and community dialogues.

- Establish and enforce robust anti-harassment policies in workplaces and educational institutions. Provide training for both men and women on respectful behavior and legal rights.

- Develop and initiate programs to educate families about the benefits of supporting women's roles in education and the workforce.
- Collaborate with policymakers to advocate for laws and policies that promote gender equality and protect women's rights.

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