Effects of Instagram False Reality on Body Image among University Students of Pakistan

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Abstract

Internet, especially the advent to social media has truly revolutionized the globe, making human beings more aware and more addicted at the same time. Social networking sites have been adopted by its users with immense speed, creating borderless social communities and spreading global trends with viral effects. It has also been observed that youth, being digital natives, is more active, persistent and creative user of such platforms. Hence, they are more into tendencies of freely sharing their thoughts, acts and ideals as well as adopting what matches their opinion and feelings. Female users, according to research, have been found more effected by the social media, especially regarding body image, intra-sexual competition, body dissatisfaction and drive for thinness etc. It has been observed that body ideals cultivate distress and dissatisfaction among female users of social media. The apps and tools of photo editing and makeup filters further aggravated the effects of photo activity on social media. Instagram, as one of the leading social networking site, has multiple such tools to craft false realities by editing photos. Such false realities have potential to create multiple effects on users, especially female users regarding the body image. This research, by inquiring 400 female university students of Lahore-Pakistan through a quantitative survey, intended to investigate how Instagram photo activity effects young respondents regarding body image, body dissatisfaction, intra-sexual competition and drive for thinness. The results revealed positive relationship between the use of Instagram photo activity and above said variables regarding body image.
Keywords: Instagram, Body Image, Body Dissatisfaction, Drive for Thinness, Fake Reality

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1. Introduction

Social media has revolutionized the globe by making networking and interaction more widespread and effective. Literature indicates that users especially female compare their appearance on social networking sites which leads them towards body dissatisfaction and drive for thinness. This study is based on false reality which includes picture editing and filtration on Instagram. Social media has introduced some editing and filtration tools which are commonly used by females to edit and shape their pictures by doing fake makeup and body shaping to represent them as they wish to be. Such effect of media on female's body appearance is studied vastly in social science research (Bessenoff, 2006).

According to research, girls use various types of media to satisfy their needs of learning about beauty products and standards and about physical appearance (Heinberg, Altabe, & Tantleff-Dunn, 1999). Previous studies concluded that social media messages affect females which lead them to body dissatisfaction and drive for thinness (Groesz, Levine & Murnen, 2002). Users of social media, includes celebrities manipulate the pictures which shows unrealistic body and weight (Grabe, Hyde, & Ward, 2008). In previous studies women declare that they are pressurized by social media regarding their body weight and appearance (Lally, 2007). Female users of Instagram compare themselves with other member's pictures and videos. This led them to a world of negativity i.e body dissatisfaction, unhealthy lifestyle, and intra-sexual competitiveness for mates and eating disorder to become thinner.

Present study indicates the importance of Instagram on which female users use photo manipulation tools to look better than other friends and users. This study includes young girls who share their images on social networking sites to show that they have ideal body. This race leads young girls towards negativity, which involve overthinking on their body appearance and intra-sexual competitiveness of mates.

The purpose of the study is to examine how Instagram photo activity of young female affect their body image and how it creates body dissatisfaction; and how they drive themselves for thinness. This study also indicates how Instagram photo activity creates intra sexual competition with their friends and family for their mates. This study primarily focuses on how social media (Instagram) affect female body image which leads them to body dissatisfaction and drive for thinness.

1.1 Research Questions

RQ1: How Instagram Photo Activity, appearance related comparison, Intra-sexual competition, body dissatisfaction and drive for thinness are significantly related?

RQ2: How Instagram photo activity is a significant predictor of body dissatisfaction among Pakistani female students?

RQ3: How Appearance related comparison on social networking sites is a significant predictor of intra-sexual competition among female university students?

RQ4: How Appearance related social comparison on Instagram is a significant predictor of drive for thinness among female students?

1.2 Hypothesis

H₁ There is significant relationship between Instagram Photo Activity, appearance related comparison, Intra-sexual competition, body dissatisfaction and drive for thinness.

H₂ Instagram photo activity is a significant predictor of body dissatisfaction among Pakistani female students.

H₃ Appearance related comparison on social networking sites is a significant predictor of intra-sexual competition among female university students.

H₄ Appearance related social comparison on Instagram is a significant predictor of drive for thinness among female students.

2. Theoretical Framework

Social Comparison Theory as theoretical framework gives life to this research bymaking the concepts under this study more understandable and meaningful (Adom & Hussein, 2018; Imenda, 2014).

In 1954, Leon Festinger published the first document on Social Comparison Theory. Festinger proposed that people evaluate themselves in comparison to others. People judge their own self on the basis of social comparison or analyzing the self in relation with others. People set up a standard level on which they evaluate their selves (Festinger, 1980). For example in a classroom student might compare herself with the toper of the class. If she finds that her abilities and score is not on the level of toper, she might concentrate more on her studies and improve her abilities (Miller & et al, 2015).

Festinger mentioned following hypothesis of social comparison theory in his book 'Social Comparison Processes'.

   i. There exist, in the human organism, a drive to evaluate his opinions and abilities.

  ii. To the extent that objective, non-social means are not available, people evaluate their opinions and abilities by comparison respectively with the opinions and abilities of others.

 iii. The tendency to compare oneself with some other specific person decreases as the difference between his opinion or ability and one's own increases.

 iv. There is a unidirectional drive upward in the case of abilities which is largely absent in opinions.

  v. There are non-social restraints which make it difficult or even impossible to change one's ability. These non-social restraints are largely absent from opinions.

According to this theory people compare themselves with other people, who are similar to them and have similar abilities. Comparison is more authentic when the target person's age gender and abilities are same.

According to Festinger's theory of social comparison there are two types of social comparison.

   i. When a person compare with the other person who is better than him/her is known as upward comparison. Upward comparison occurs when there is a desire to improve oneself.

  ii. Downward comparison occurs when a person compares himself with the person who is worse than him. It occurs when a person realize his abilities are better than others.

There are numerous theories which explain the negative effects of media on body image. Social comparison theory is most applicable theory regarding effect of media on body image (Groesz et al., 2002; Crowther & Myers, 2009). This theory states that people compare their opinions and abilities with other abilities, attitudes and opinions (Festinger, 1954). Comparison exists in two ways, upward comparison and downward comparison.

Appearance related comparison on Instagram evaluates being attractive and thinner (Groesz et al., 2002). When a woman compares themselves with thinner model or women it directly leads them towards body dissatisfaction. This comparison on Instagram motivates females to do dieting and cosmetic surgeries to achieve ideal body image. Previous studies have shown that appearance comparison on social media leaves negative effects, including lower self-esteem, eating disorder and body dissatisfaction (Cachelin & Regan, 2006; Herman & Polivy, 2002). On social networking site, when a women compare her profile with other women who is thinner than her develop greater level of body dissatisfaction.

Some people especially females idealized other users (may be celebrities) and want to become like them. This comparison on social media negatively effects female towards body dissatisfaction. Literature shows that female usually make upward comparison rather than downward comparison in their daily lives (Leahey & Crowther, 2008; Crowther, & Ciesla, 2011). The literature also reveals that appearance comparison on Instagram develops intra-sexual competition and body dissatisfaction among female students of Pakistan (Iftikhar, Yasmeen, Nadeem, & Ahmad, 2023).

Most of the females are suffering from upward social comparison because they want to become like others who have better body image.

3. Review of Literature
3.1 Social Media, Female Body Image and Body Dissatisfaction

Today, social media is very popular among every age group of people. Instagram is one of the popular social networking site among youth and this social networking site allows users to share pictures with a lot of features of picture editing, photo manipulation and filters. Research studies reveal that the females believed being more concerned about their weight and health than non-users of Instagram. In United States female students at high school are more conscious about their appearances in school than other non-users of Instagram (Gray & Meier, 2014). According to Tiggemann & Miller female who spend more time on social media are more dissatisfied from their body image. Body image is a self-body attitude or feeling towards your own body especially body shape, weight and appearance. This feeling and behavior may affect negatively or positively to the person (Bailey et al, 2015).

In an experimental study researcher give pictures of three types of model to participants (Groesz, Levine, & Murnen, 2002). Thin body women, over size women and normal size women pictures were distributed to measure how much women feel dissatisfied from their bodies. In these experimental studies this concluded that women are very much concerned about their bodies after watching thin females (Hendrickse, Secharan, & Clayton, 2016). According to research, magazines are most common source which creates body dissatisfaction among youth. 'Body dissatisfaction is the negative

thoughts about your own body which create negative effects, depression, eating disorder and dissatisfaction (Dittmar 2005). 47% women read magazines for fashion tips and beauty which leads them to body dissatisfaction. Because of reading magazines researchers indicated that magazines are responsible for developing dissatisfaction females.

Berg et al (2007) found out that there is no relationship between media and body dissatisfaction among males. One the other side females who are suffering from body image issues are directly affected by media. Holmstrom (2004) conducted a meta-analysis on previous literature based on body dissatisfaction, eating disorder and body images issues. Holmstrom selected 34 studies in which media was independent variable and body dissatisfaction, body image and disorders are dependent variable. He concluded that female feel satisfied about their bodies after viewing heavy body images and they are not changing they lifestyle and appearance after viewing thin bodies. Halliwell and Dittmar (2004) presented some advertisements of models and no model pictures. They instructed the participants to make comparisons of their appearance with the body shown in the pictures. They examined that those participants who viewed thin model advertisements are suffering from body image issues than those who viewed normal commercials. Similarly Lin & Kulik (2002) concluded that body dissatisfaction is among those participants who viewed thin peer, then those who viewed nothing. Ahadzadeh and Sharif (2017) also concluded that Instagram usage is directly associated with body dissatisfaction and low self-esteem. In an experimental study participant showed images of celebrities and unknown images of groups from public profiles of Instagram. It is concluded that people are more exposed to thin model images (Brown, Tiggemann, 2016). The effect of traditional media images on female body image is studied 1980's (Grabe et al., 2008; Want, 2009).

3.2 Social Media, Appearance Comparison, Intra-Sexual Competition and Drive for Thinness

Female usually compare their appearance with other members on social media. A recent study investigates the appearance related comparison on Facebook. Researchers select those participants who owned their Facebook accounts and use magazines websites. The researcher concluded that people who use magazines websites are very much concerned about their appearance and those who use Facebook are mostly concerned about their face beauty, skin and hair (Fardouly et al., 2015). In 2004 Hawkins, Richards, Granley & Stein conducted a research in which they reported that images of thin models create body dissatisfaction among females. In America a report was published on 'ethics of photo editing (Brandeis University, 2012). Thin model images are also used to attract male audience. During a research male participants were showed images of different women of different shape light and heavier. Most of them rate thin female images more attractive (Wilson, Tripp and Boland, 2005). Leahey and Crowther (2008) conducted research on upward and downward appearance. In the research they ask participants to fill out questionnaires about appearance comparisons they face in their daily lives. This research concluded that women who face upward appearance comparison are facing negative effects in their lives. Ritchins (1991) found that 50 percent

of women compare their bodies with models which are shown in the advertisements, and he also declared that advertisements forced women to hate their bodies.

Fisher and Cox (2011) performed qualitative research in which they asked participants to list down all the tactics they do for mate attention. The results showed that the majority of tactics were those related to self-promotion, followed by mate manipulation. After qualitative research Fisher and Cox (2011) conducted quantitative research on these tactics to check how much people use this behavior in their life. They concluded that self-promotion is the most significant tactics used by women duringintra-sexual competition. Self-promotion is related to self-improvement. It means person improve their image in front of their mate (Cox, Fisher & Gordon, 2009). Intersexual competition is higher in females as compared to males (Payne, 1979). Females are more possessive than males when making mating decisions (Symons, 1980; Buss, 1995). Literature shows that women compete, but in a different way than men (Goor & Solano, 2010). Both male and females are involved in intra-sexual competition, both sexes are aggressive, but they show it differently (Bettencourt & Kernahan, 1997; Björkqvist, Lagerspetz, & Kaukiainen, 1992). According to Calpan's (2005) research, women get pressurized to behave nice, good, and helpful, to look attractive and never get rude. Strikwerda (1992) examined that male compete to get reward and women compete for male attention.

According to American media research popular TV programs which shows that thin body women are more beautiful, popular and successful (Tiggemann & Hargreaves, 2003). This is the reason that ordinary women want to be thin and successful (Forbes et al, 2oo7).

Hendricks (2002) conducted research on traditional media prime time. In which he examined that every comedy show involved a heavy overweight female which are teased by the others. In the end of the show overweight stressed women lost her weight and become more successful and confident. Harrison and Hefner (2006) found that female who use traditional media are suffering from eating disorder and planning for thinner body in future. During a research Stice and Bearman (2001) find out that females who are going through body image issues and lack of social support are more pressurized to become thin. During an experimental research, Tiggemann and McGill (2004) selected female students and give them pictures of thin model body parts and some neutral advertisements without models. They examined that females who viewed model pictures are more dissatisfied from their appearance as compared to other neutral advertisements.

Harrison et al (2006) conducted content analysis on comedy dialogues which are used in dramas. They examined that female who are overweight in dramas received negative comments on their body shape and figure in a sense of humor. On the other hand thin body female received beautiful comments by the male character. This study also concluded that these dramas directly affect women who are suffering from body dissatisfaction.   During a meta-analysis Strasburger (1995) found from twenty experimental studies that the higher exposure of thin models increased negative feelings among young woman regarding their bodies.

Keeping in view the literature mentioned above, the present study considers the case of Pakistan, not comprehensively researched before, to investigate how Instagram false realities push young university female students of Lahore for body image comparison, body dissatisfaction, intra-sexual competition and drive for thinness. It will attempt to add the case of Pakistan to the existing literature on the subject and reveal the tendencies of young female university students in the domains before said.

4. Method

The method employed for data collection regarding the above-mentioned research questions is quantitative survey. It has collected data through a static questionnaire for the whole sampled respondents. For this study, female of Pakistan age 18 to 28 are being taken as the universe, while female age 18 to 24 of different universities of Lahore are regarded as population for conducting the survey. A sample of 400 females was considered for this study. The sample has been extracted from the following universities of Lahore-Punjab.

  i.   University of Management and Technology (UMT)
 ii.   Kinnaird College for Women Lahore (KC)
iii.   Lahore School of Economics (LSE).
 iv.   University of South Asia (USA)

The researchers have drawn 100 female respondents from each university. The reason behind selecting these universities was convenience for the researchers to approach them for data collection. The researchers have used 'purposive sampling'. "A purposive sample is a non-probability sample that is selected based on characteristics of a population and the objective of the study" (Crossman, 2018).

Closed-ended questionnaire was formulated for collecting the data from respondents. Keeping in view the objectives of the study, 5 points Likert Scale has been used to get information from the respondents, where 1 mean strongly disagree and 5 means strongly agree. The obtained quantitative data has been analyzed with SPSS to statistically test the stated hypothesis.

5. Results

5.1 Results of Research Questions

Four research questions were formulated for this research, which yielded the following results:

5.1.1 How Instagram Photo Activity, appearance related comparison, Intra-sexual competition, body dissatisfaction and drive for thinness are significantly related?

Instagram is one of the popular website which allows users to post pictures and videos. Based on previous studies, Instagram photo activity, appearance comparison, intra-sexual competition, body dissatisfaction and drive for thinness are significantly related. That means, when Instagram photo activity increases, appearance comparison will also increase. Same as, when appearance comparisons on Instagram increase intra-sexual comparison will also increase. On the other side the result of the study shows that body dissatisfaction does not increase with Instagram photo activity. Results of the study showed that Instagram photo activity is significantly positively related to appearance

comparison and drive for thinness. Previous studies also show that usage of social media creates negative effect on female behavior. If media activity is increased, appearance comparison and low self-esteem is also increased (Mehdizadeh, 2010; Steinfield, Ellison & Lampe, 2008). Female users who want to have an ideal body and to become popular, they drive themselves for thinness and various cosmetic surgeries (Tanis & Vermeulen, 2012).

On the other side results of this study show that Instagram photo activity is significantly negatively related to body dissatisfaction and intra-sexual competition. Recently, a study conducted on Instagram including 195 female participants exposed that viewing ideal body images does not create body dissatisfaction. The results showed that female users on Instagram are not dissatisfied, rather, they feel positive and satisfied from their body appearance (Cohen, Fardouly & John 2019). Results of our study also shows that most of the female users are not dissatisfied. A research, conducted in Netherlands and Canada, on intra-sexual competition and its differences resulted that intra-sexual competition is increased and become stronger (Bunnk, 2011). On the other hand, our research resulted that 248 female users agree that they buy attractive clothes and maintain their bodies to attract males but somehow, they didn't agree on that appearance comparison develops intra-sexual competition for mates.

5.1.2 How Instagram photo activity is a significant predictor of body dissatisfaction among Pakistani female students?

The use of social media is growing rapidly, especially after 2002. This is also declared that social media is mostly used by young boys and girls (Pew, 2015). This study is based on Instagram that how it affects female body image. To get the results, participants were asked some questions based on their daily routine of Instagram photo activity. 54% respondents agree that they check other's users profile, and 26% respondents strongly agree with it. 234 respondents agree that they like photos and videos of other friends. However 248 respondents strongly agree that they compare their bellies with other friends on Instagram. 62% respondents agree that their body parts are huge than other friends. 154 respondents were found not satisfied with their bodies. Females who are suffering from body image issues are directly affected by Instagram.

5.1.3 How Appearance related comparison on social networking sites is a significant predictor of intra-sexual competition among female university students?

Darwin (1871) realized that male or female compete with same gender for opposite gender attention. The results of the study show that 236 respondents compare their lives with others, and they also agree that they compare their achievements with other users on social networking sites. 82% respondents agree that they compare their physical appearance with other users on Instagram. However 84% respondents agreed to it that if they look skinner, they will more attractive to men and 79% respondents disagree with it. 68% respondents agree that they keep their bodies fit than other females to save their partners from others. 75% respondents agreed that they buy beautiful clothes to impress their partners and 234 respondents said that they don't bother opinion of other women. Female users on Instagram compare their appearance with other users which increase

intra sexual competition among university students. 233 respondents strongly agree that romantic partner is more important to them.

5.1.4 How Appearance related social comparison on Instagram is a significant predictor of drive for thinness among female students?

From 400 respondents 233 respondents did not like the shape of their bodies. 224/400 respondents want to look perfect and ideal same like their social media friends. 241 Respondents agree that they exaggerate or magnify the importance of weight, after using social media and 68 respondents disagree to it. 62% respondents were found afraid of gaining weight after using social networking sites. 229/400 respondents agreed that if they gain a pound, they will keep gaining it. 157/400 respondents disagree that they eat sweets and carbohydrates without feeling nervous. Many female users of Instagram compare their bodies with other users and drive their own bodies for thinness. 179/400 respondents agreed that they think about dieting after using Instagram.249/400 respondents strongly agreed that they feel extremely guilty after overeating.

5.2 Results of Hypotheses

Following are the results of hypotheses.

H$_1$: There is significant relationship between Instagram Photo Activity, appearance related comparison, Intra-sexual competition, body dissatisfaction and drive for thinness.

Table 1: Pearson correlation Score (N=400)

Variables	1	2	3	4	5
1. Instagram Photo-activity	1	.285**	-.164**	-.127*	.200**
2. Appearance Comparison	---	1	.462**	-.608**	.751**
3. Intra-sexual Comparison	---	---	1	.139**	.303**
4. Body Dissatisfaction	---	---	---	1	-.355**
5. Drive for Thinness	---	---	---	---	1

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between photo activity, appearance comparison, intrasexual competition, body dissatisfaction and drive for thinness (as measured by the self-administered scale) and Perce (as measured by the Perceived Stress Scale) was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There is a significant positive relationship between Instagram Photo Activity and appearance related comparison, r (398) = .285, p < .05. There is a significant negative relationship between Instagram photo activity with intra sexual competition, r (398) = -.164, p <.05.

There is a significant negative relationship between Instagram photo activity with body dissatisfaction, $r(398) = -.127$, p <.05 and there is a significant positive relationship between Instagram photo activity with drive for thinness, $r(398) = .200$, p <.05.

H₂: Instagram photo activity is a significant predictor of body dissatisfaction among Pakistani female students.

To examine the result of Instagram photo activity on body dissatisfaction simple linear regression is applied.

Table 2: Simple Linear Regression Analysis for Students Body Dissatisfaction Score (N=400)

Predictor	B	SE(B)	β	t	Sig. (p)
Constant	30.164	.869			
Instagram Photo Activity	-.110	.043	-.127	-2.559	.011

Note.
R^2=.016

A simple linear regression analysis was conducted with body dissatisfaction as the criterion variable and Instagram photo activity as the predictor. Instagram photo activity is a significant predictor of body dissatisfaction, $β$ = -.127, t (-2.559) = 0.11, p < .05, and accounted for 1.6% (R^2=.016) of the variance in body dissatisfaction scores.

H₃: Appearance related comparison on social networking sites is a significant predictor of intra-sexual competition among female university students.

Simple linear regression is used to examine that appearance comparison on Instagram is significant predictor of intra sexual competition among female university students.

Table 3: Simple Linear Regression Analysis for Students Intra-sexual Competition Score (N=400)

Predictor	B	SE(B)	β	t	Sig. (p)
Constant	20.972	.618			
Appearance Comparison	.119	.011	.462	10.401	.000

Note.
R^2=.214

Simple linear Regression analysis was conducted with intrasexual competition among females as the criterion variable and appearance related comparison on Instagram as the predictor. Appearance related comparison on social networking sites is a significant predictor of intrasexual competition among female university students, $β$ = .462, t (10.401) = .000, p < .05, and accounted for 21.4% (R^2=.214) of the variance in intra-sexual competition scores.

H₄: Appearance related social comparison on Instagram is a significant predictor of drive for thinness among female students.

Table 4: Simple Linear Regression Analysis for Students Drive for thinness Score (N=400)

Predictor	B	SE(B)	β	t	Sig. (p)
Constant	-14.716	1.848			

| Appearance Comparison | .776 | .034 | .751 | 22.713 | .000 |

Note. R^2=.565

Simple linear Regression analysis was conducted with drive for thinness among females as the criterion variable and appearance related comparison on Instagram as the predictor. Appearance related social comparison on Instagram is a significant predictor of drive for thinness among female students, *β* = .751, *t* (22.713) = .000, p < .05, and accounted for 56.5% (R^2=.565) of the variance in drive for thinness scores.

6. Conclusion

Social networking sites are growing rapidly. Facebook, Instagram and Snapchat are very common social media which allow users to share their images and life happenings. Through these social networking sites, people interact with each other and somehow, they compare their life and appearance with other users. Appearance related comparisons on social media is increasing day by day. Women who use Facebook and have their personal profiles on social media are not satisfied from their appearance (Stronge et al, 2015). Literature indicates that female users mostly compare their appearance with other users on Instagram. Female users compare their appearance with other female images.

The results of this study show that 236/400 respondents compare their lives with others and also agreed that they compare their achievements with other users on social networking sites. 82% respondents agreed that they compare their physical appearance with other users on Instagram. The results show that appearance comparison on Instagram is significantly related to body dissatisfaction, intra-sexual competition and drive for thinness. When Instagram photo activity increases, appearance comparison also increases.

The results also showed that intra-sexual competition is associated with appearance comparison. 68 % respondents agreed to it that if they look skinny, they will be more attractive to men, which shows that female who are suffering from body dissatisfaction are also involved in intra sexual competition. The results indicated that females who compare their bodies with other on Instagram are more engaged in body dissatisfaction and drive for thinness.

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Impact of Cash Flow Volatility on Capital Structure and Debt of Different Maturities

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Abstract

The firm's capital structure is the most crucial decision to its operating and investment activities, and it has been studied at both the academic and corporate levels. The purpose of this study is to investigate how different Pakistani listed companies' cash flow volatility may have an impact on their capital structure and the maturity of their debt. The research covers the years 2013 through 2022 and includes data from a total of 80 non-financial companies. The fact that multiple measures of capital structure and cash flow volatility have been used makes this study stand out as being particularly novel. The findings of the research indicate that capital structure and cash flow volatility have a significant and negative relationship with one another. This indicates that a one standard deviation increase in cash flow volatility will lead to a decrease of 0.24 in leverage. Our model accurately predicted a significant and negative connection between debt maturity and the volatility of cash flow. That means a decrease in debt maturity of 0.82 percentage points for every standard deviation in cash flow volatility. The results of this model suggest that when dealing with high levels of cash flow volatility, businesses should utilize debt with a shorter maturity. For the purposes of analysis, the OLS and GLM Logit link functions on SPSS have been utilized over the data.

Keywords: Capital structure, Cash flow volatility, Debt maturity, Multiple measures, GLM logit

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1.   Introduction

How organizations or the firms decide about their capital structure and what are the important determinants of capital structure, are the two most frequently and extensively researched areas in the field of corporate finance. Capital structure decision is the most critical decision for the firms. According to net income approach, if a firm is failed to make this decision effectively this may lead a firm to insolvency. Whereas according to Modigliani and miller (1958) capital structure is irrelevant to the value of the firm. A rich theoretical and empirical research literature is available on capital structure and the factors affecting its decision but there is no conclusive argument.

Pierluigi Santosuosso (2015) stated that various surveys have been conducted around the world in order to analyze the financial manager's view or opinions about the factors affecting their policies of capital structure in practice. Earning volatility or the cash flow volatility considered as the most important factors that influence decisions of financial mangers regarding capital structure. Similarly in decisions regarding issuing debt cash flow volatility is considered as third most important element (Graham & Harvey, 2001).

As cash flow volatility is used as proxy of business risk, which means probability of an organization to face financial distress. That's way (Keefe and Yaghoubi 2017) argued that the higher cash flow volatility leads to higher cost of debt which demotivates firm to leaver up their capital structure. Viet and Dang (2017), agreed with the arguments of (Keefe and Yaghoubi 2017) and further found that some time even firms having low cash flow volatility do not use higher levels of debt in capital structure because they are financially constrained. So reverse relationship is not always observed. Another study of Choe et al. (1993) also did not found reverse relationship they cited that even having low cash flow volatility firms do not levered up their capital because of macroeconomic conditions which may not be supportive for borrowing. A very prominent theory of capital structure "Trade-off theory" suggests that firm's leverage level fall when there is increase in volatility of cash flow (Frank and Goyal, 2009). Similarly Evan and James (2015) found that firms facing financial constraints use debt in their capital structure when their cash flow volatility is low but face high levels of problems when try to unlevered due to high cash flow volatility then. By the same token Dudley and James, (2014) found negative and significant relationship of both leverage and cash flow volatility furthermore it states that firms increase their leverage with decrease in cash flow volatility but volatility do not increase in response to firms decrease in its leverage or retirement of leverage, more over they also states that this irregular behavior of cash flow volatility is more prominent in financially constraint firms. Lastly (Friend and Lang 1988) identified positive relationship among volatility and leverage; however (Bradley, Jarrell, and Kim 1984) analyzed a negative relationship.

On the other hand Ayla and Titman (2004) found that among investment expenditures, history of stock price and cash flow volatility, cash flow volatility is least effecting debt ratio of firms. Likewise Frank and Goyal (2009) in their study of determinates of capital structure determined twenty five explanatory variables represented as determinates of capital structure in previous studies and found only

six of them significantly explain capital structure in empirical testing. Further it is identified that cash flow volatility is not robustly explain capital structure. Likewise many other studies such as Roberts (2005) and Antoniou, Guney, and Paudyal (2008) they also do not find any reliable explaining power of cash flow volatility for capital structure. A seminal study of international firms conducted by Rajan and Zingales (1995) do not have cash flow volatility as explanatory variable as well. Parallel studies were performed by (Leary and Roberts 2014) and (Kayhan and Titman 2007).

Even the available literature regarding relationship of cash flow volatility and a firm's use of debt is extensive still there is no consensus on the nature of relationship between them. Further our understanding of capital structure is developed from those studies based on data of advanced countries or economies which have different infrastructure and institutional differences than developing countries. Markets of developing countries are comparatively young than markets of developed countries. Keeping this in view the purpose of this study is to analyze this puzzled relationship of cash flow volatility and capital structure of firms belong to developing countries like Pakistan, as we have found no literature in Pakistani setting. This relationship is further explored by analyzing the debt maturity structure of the firms with different levels of cash flow volatility.

We have used multiple measures of cash flow volatility and leverage because of lack of uniformity in the existing literature whereas conclusion is independent of which measure is used. In this study, we endeavor to analyze in what way cash flow volatility defines firm's leverage and debt maturity structure in the context of Pakistani listed manufacturing sector firms. This sector has been chosen on the basis of the fact that it alone contribute 13.45 percent in GDP in 2017.

The remaining part of the paper is organizes as, section 2 provides framework used to formulate hypotheses. Whereas section 3 contains information related to methodology followed for this research. Last section presents results and discussion of the analysis.

2. Hypothesis development

Those firms which have high cash flow volatility and bankruptcy cost are characterized as riskier firms. As stated earlier that trade off theory suggest that the firms at higher levels of risk include lower level of debt in their capital structure. There exist plenty of other arguments which support believe of trade off theory. For example model of Merton (1974) which considered equity of a firm as call option over the assets of the firm. This model states that the firm will be default firm if the value of the firm's asset is less than value of debt on its maturity date. This concept provides a simple indicator or index for the chances of firm's default, as a function of assets present value as compared to the value of debt and asset volatility of that firm.

Leland (1994) developed a model similar to that of Merton (1974), by the name of optimal capital structure model which states that optimal leverage counter balance tax benefit over debt with the expected bankruptcy cost. Most of the prior studies found negative relationship between cash flow volatility and leverage. Further Minton and Schrand (1999) found that the relationship between cash flow volatility and cost of debt is positive. Due to this reasons firms having higher cash flow volatility try to reduce their leverage level to reduce cost of debt. This leads us to hypothesize that the leverage and cash flow volatility has inverse relationship.

H1: There exist negative relationship between cash flow volatility and leverage.

Cai et al. (2008), states that optimal debt maturity structure or choices are very crucial for firms as it helps to avoid any possible bankruptcy and agency cost. Another study by Kane et al. (1985) found negative relationship between asset return volatility and debt maturity structure. As cash flow volatility is also used as risk measure (Sarkar, 1999) states that it (cash flow volatility) increases chances of bankruptcy thus having inverse relationship with debt maturity.

Cash flow volatility is identified as key variable that influences optimal debt maturity structure of a firm Miltersen and Torous (2008). Dangl and Zechner (2016) used comparative analysis method to claim that optimal debt maturity is reduced when there is higher cash flow volatility. Further they stated that growth in the cash flow rate results in extension of optimal maturity of the debt. Keefe and Yaghoubi (2016) used Black and Scholes model (1973) on capital structure to illustrate the marginal cost of debt increase if a firm issue debt of longer maturity when there is high cash flow volatility. Ultimately this results in issuance of shorter maturity debt when experiencing high cash flow volatility.

In another study Ju and Ou-Yang (2006) firms issue shorter maturity debt or issue debt more frequently when having higher cash flow vilitality.in this way firms gain benefits of tax shield over debt and bankruptcy cost is reduced and vis a vis. therefore it is hypothesizes that the higher cash flow volatility leads to shorter maturity debts.

H2: Firms with high cash flow volatility prefer to use debt of shorter maturities.

3. Methodology

3.1. Sample

Sample of the study consist on 80 non-financial listed firms. Sample is constructed on the basis of availability of data and time constraint. Panal data of 10 years from 2013 to 2022 for these 80 firms has been collected. Final data set reduced to 7 years because of 3 years lag is taken on cash flow volatility measure. Data has been collected from annual reports of firms and Karachi stock exchange website.

4. Variable construction

4.1. Capital structure

Previous studies on capital structure used different measures for leverage. There is no universal leverage measure. In most of the prior studies leverage or proxy of capital structure is defined as ratio of financial debt and total asset (FD/TA). We intended to not fellow this measure as it has been criticized by Welch (2011) which states that this measure ignore non-financial liabilities and treat them as equity which is not correct. During literature review we found three different definitions for leverage. 1) The most broad definition of debt include all liabilities, financial and non-financial (Rajan and Zingales 1995). 2) This approach consider only short term and long term financial liabilities as debt (Huang and Song 2006). 3) According to third definition the narrowest approach, only long term debt is considered as debt (Bradley et al 1984). Further these three measures of capital structure are defined at both book and market value to address criticism of Welch (2011) which results in six measures of capital structure in total. To construct capital structure variables at book value we used book value of equity (total asset) in denominator and for market value

calculation we used market value of equity (market capitalization) in denominator. Detailed construction of capital structure measures is given in the table 1.

5.   **Cash flow Volatility:**

Like capital structure cash flow volatility is also measured in number of ways in prior studies. Dierker et al., 2013, scaled the annualized standard deviation of operating cash flows by total asset to construct cash flow volatility measure. Percentage change in annual earning's first difference subtract mean of the first differences is used to construct cash flow volatility measure by (Antoniou et al., 2009). In another study (Booth et al., 2001) standard deviation of ROS (return on sales) is used as proxy. Which means there is no standard cash flow volatility measure. Due to lack of consensus over one definition of cash flow volatility we used two different definition of cash flow volatility.

In order to construct final cash flow volatility measure we first need to develop a measure of cash flow. We used operating income before depreciation (OIBD) as our first, measure of cash flow and cash base operating profit as second measure (Ball et al. 2015). At second step we scaled our cash flow measures by net asset. Various prior studies scaled their cash flow measure by net asset like Bradley et al. (1984) and Dierker et al. (2013). Instead of total asset net assets has been used because according to Pinkowitz and Williamson (2007) cash holdings of a firm are function of its cash flow volatility. By using net assets this function has been removed. Furthermore the advantage of scaling measures is that it makes comparison between firms easy. After that on third step, to measure volatility in our cash flow measures we fallowed Friend and Lang (1988). By following Friend and Lang (1988) we calculated five-year rolling standard deviation of both measures of cash flow. At Last step we lag cash flow volatility measure to deal with any potential issue of indigeneity. Detailed calculation of cash flow measures is given in the table 1.

6.   **Control variable of the study:**

Some control variables are also the part of study. These variables have been included to avoid any possible alternative explanations. Variables identified by Frank and Goyal (2009) have been used as control variables. There are total five control variables and their detail construction is presented in table 1.

Table 1: Detailed variable construction

NO.	VARIABLE	CONTRUCTION
	CAPITAL STRUCTURE	
1	Capital structure as total liability at market value (LEV 1)	• Total liability/(total asset-equity)+market capitalization • TL/(TA-Equ)+MC
2	Capital structure as total liability at book value (LEV 2)	• Total liability /total asset • TL/TA
3	Capital structure as total debt at market value (LEV 3)	• Total debt/total debt +market capitalization • TD/TD+MC
4	Capital structure as total debt at book value (LEV 4)	• Total debt/total asset • TD/TA
5	Capital structure as long term debt only at market value (LEV 5)	• Long term debt/long term debt market capitalization • LD/LD+MC
6	Capital structure as long term debt only at book value(LEV 6)	• Long term debt /total asset

		• LD/TA

CASH FLOW VOLITALITY		
	Operating income before depreciation(vcf 1)	• OIBD= Net Sales- Operating Expenses • OIBD=NS-OE
1	Cash based operating Profit (vcf 2)	• CBOP= Operating profit –Receivables-inventory-prepaid expenses+ total deferred revenue+ account payable+ accrued expenses • CBOP=OP-R-INV-PE+DR+AP+AE
2	Operating Profit (OP)	• Operating profit =sales-cost of goods sold-(operating expenses- research and development expenses) • OP=S-CGS-(OE-R&D Exp)

CONTROL VARIABLES		
1	Asset Tangibility (A.Tan)	• Fix asset/Total asset • FA/TA
2	Firm size (f size)	• Natural log of total asset • Ln (TA)
3	Profitability (profit)	• Operation income before depreciation/total asset • OIBD/TA
4	Market to book ratio (MTB)	• Market value of asset or market capitalization/total asset • MC/TA
5	Ln R&D	• R&D expenses /sales • Ln (1+R&D/S)

7.   Debt Maturity:

The third variable which is need to test second hypothesis is Debt maturity and it is a categorical variable. Like our other two variables it also has been measured in different ways in previous studies resulting in no standard measure. For example Fan et al. (2012) estimated it by using the ratio of long-term debt to total debt. Another study conducted by Barclay and Smith (1995) ratio of debt with more than three years maturity to total debt is used as measure of debt maturity. Keefe and Yaghoubi (2016) have used a unique approach to measure debt maturity. They assigned different categories according to the usage of debt of firms of different maturities. On category 1 they place those firms which are using debentures of maturity life 10 years and firms using notes but not debentures are placed in second category. Further in category three those firms fall which are using long term debt with maturity less than notes. Whereas firms in category four are those which are using short term debts in their capital structure. And in last category firms which do not use short term or long term debt in their capital structure are placed. We used their approach to construct our debt maturity variable with little modifications. Detailed construction of debt maturity is given in the following table.

Table 2: Debt Maturity

Categories	Debentures (D)	Notes (N)	Long Term Debt (LTD)	Short Term Debt (STD)	Short & Long Term Debt (SLTD)
1	Yes	N.A	Yes	N.A	N.A
2	No	Yes	Yes	N.A	N.A

3	No	No	Yes	N.A	N.A
4	No	No	No	Yes	NO
5	No	No	No	No	NO

Table shows that there are total 5 categories of debt maturity variable. Reaming table explains the rules according to which variable is set. "Yes" means the firm is using that type of debt where as "No" means firm is not using that type of debt and N.A means fir may or may not use that type of debt.

8. Estimation models

In order to test our first hypothesis or impact of cash flow volatility over leverage we followed the methodology used by (Papke and Wooldridge 1996) and (Kieschnick and McCullough 2003). They used GLM with logit link function, this model is preferred because our dependent variable value lies between 0 and 1 being a fractional variable. According to Cook et al. (2008) conditional anticipations for fractional dependent variable is represented as nonlinear function of independent variables. In such case application of linear function will results in error. Following GLM model is used to test hypothesis 1 with control variables.

$$E(Lev_{i,t}) = G(\beta_0 + \beta_1 VCF_{i,t-1} + \beta_2 prof_{i,t-1} + \beta_3 FSize_{i,t-1} + \beta_3 tang_{i,t-1} + \beta_4 RND_{i,t-1} + \beta_7 MTB_{i,t-1} + \mu)$$

In order to test the hypothesis 2 or the impact of cash flow volatility over debt maturity structure of the firms, we used OLS model by introducing categories into OLS. Because our dependent variable is a categorical variable, estimation model is given below.

$$(Dm > m \mid c, x_{t-1,}v_j) = \theta(\beta_1 VCF_{i,t-1} + \beta_2 prof_{i,t-1} + \beta_3 FSize_{i,t-1} + \beta_3 tang_{i,t-1} + \beta_4 RND_{i,t-1} + \beta_5 FAge_{i,t-1} + \beta_6 Lev_{i,t-1} + \beta_7 MTB_{i,t-1} + VJ - cm)$$

In the above model, m symbolizes the category number, whereas c represents the set of cut points of debt maturity, as we have 5 categories of debt maturity m=5,so the cut point for above mentioned model is c=4. Ø represents here cumulative distribution function of standard normal distribution, and the standard normal distribution of the residual vj N (0, 1).

9. Analysis and Discussion

9.1. Descriptive and covariance matrix:

Table 3 given below shows descriptive statistics of the variables used in the study. Tables indicates that mean of LEV 2 which is total debt at book value is highest (0.56742) among all leverage variables with max value 0.998646 and minimum value 0.000203. Cash flow volatility (VCF) have mean value 0.56742 and its maximum value 279.243 and minimum value 0. Mean value of third variable debt maturity is 2.983929 where as its maximum value is 5 and minimum value is 1.

Table 4 shows co variance analysis. Analysis of variance allows the comparison of variable in more than one group that causes the variation in other variables. The table shows the covariance analysis of the variables. The table shows the main results and interaction effects of categorical variables on the continuous variable. Market to

book ration, debt maturity, profitability and R& D are negatively co related with cash flow volatility. Whereas firm size, tangibility and leverage are positively co related.

9.2. Impact of cash flow volatility on capital structure:

The table 5 presents the results of impact of cash flow volatility and other control variables with the first proxy of capital structure that was total liability at market value. It is shown from the table that cash flow volatility showed a negative but insignificant impact on capital structure. It implies that cash flow variation didn't have any influence on the capital structure being measured by total liability at market value. It means that if a firm is measuring its leverage by considering its total liability then variation in cash flow will not effects its capital structure. All other control variables showed the insignificant impact on capital structure except research and development expenses.

Table 3: Descriptive Statistics

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Probability
LEV1	0.18081	0.00382	0.98765	0.000102	0.29803	1.354831	3.216885	172.4171	0
LEV2	0.56742	0.61371	0.99865	0.000203	0.242	-0.39145	2.124932	32.16896	0
LEV3	0.27668	0.00607	0.98765	0.0001	0.35358	0.675134	1.675169	83.49599	0
LEV4	0.40961	0.37421	0.98755	0.000123	0.2483	0.42116	2.164594	32.83944	0
LEV5	0.44471	0.654	0.9999	0.0001	0.38091	-0.1348	1.274094	71.2002	0
LEV6	0.25595	0.1488	0.98785	0.000259	0.27032	1.213655	3.367266	140.6234	0
VCF t-1	44.0378	2.25581	279.243	0	202.167	7.420419	65.75964	97043.88	0
MTB t-1	53.5181	1.01145	10043.8	8.30E-05	632.608	14.62494	225.6654	1176827	0
A.TAN t-1	0.63395	0.96259	1	-129.238	5.50387	-23.5248	555.5893	7176601	0
F.SIZE t-1	16.4764	16.459	24.7186	10.15423	1.77525	0.081137	5.485082	144.7125	0
PROFIT t-1	89.8588	0.96796	10043.8	-21.0716	761.606	10.68426	125.5836	361278.2	0
Ln R&D t-1	0.49419	0.03113	9	0	1.40486	4.096673	21.23347	9323.777	0
Debt Mat	2.98393	3	5	1	0.82325	-0.04728	1.847267	31.21374	0

TABLE 4: Covariance Analysis: Ordinary

	GENR_M	GENR_N	GENR_O	GENR_P	GENR_Q	GENR_R	GENR_S	GENR_LEV2
VCF (-1)	1							

MTBR (-1)	-0.0119	1						
	0.7792	-----						
TANG (-1)	0.00874	-0.0068	1					
	0.8365	0.8716	-----					
F.Size (-1)	0.08329	-0.0794	0.16439	1				
	0.0488	0.0605	0.0001	-----				
Profit (-1)	-0.0195	0.8265	-0.0033	-0.102165	1			

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	0.645	0	0.9377	0.0156	-----		
LN R&D (-1)	-0.043	-0.0288	-0.1468	-0.230259	-0.04	1	
	0.31	0.4971	0.0005	0	0.3444	-----	
Debt Mat. (-1)	-0.0747	-0.0222	0.05043	0.078413	-0.0454	-0.0022	1
	0.0774	0.5997	0.2334	0.0637	0.284	0.9583	-----
Leverage	0.11471	0.07788	0.00714	0.06356	0.02474	0.06449	-0.012	1
	0.0066	0.0655	0.8661	0.133	0.5591	0.1274	0.777	-----

Table 5: Generalized Linear Model (Dependent Variable: GENR_LEV1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-2.20483	0.79903	-2.759394	0.0058
VCF t-1	-0.00053	0.00078	-0.681669	0.4954
MTBR t-1	-0.00026	0.00037	-0.712055	0.4764
A.TAN t-1	-0.00214	0.01034	-0.207329	0.8358
F.SIZE t-1	0.036457	0.04753	0.767067	0.443
PROFIT t-1	0.000126	0.00015	0.867625	0.3856
Ln R&D t-1	0.177766	0.04178	4.254368	0
Mean dependent var	0.18081	S.D. dependent var		0.298029
Sum squared resid	48.31552	Log likelihood		-108.576
Akaike info criterion	0.412772	Schwarz criterion		0.466871
Hannan-Quinn criter.	0.433896	Deviance		48.31552
Deviance statistic	0.08737	Restr. deviance		49.65123
LR statistic	15.28792	Prob(LR statistic)		0.018132
Pearson SSR	48.31552	Pearson statistic		0.08737
Dispersion	0.08737			

Table 6: Generalized Linear Model (Dependent Variable: GENR_LEV2)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.63006	0.43317	-1.454554	0.1458
VCF t-1	0.000656	0.0003	2.171275	0.0299
MTBR t-1	0.000558	0.00042	1.323536	0.1857
A.TAN t-1	0.001004	0.00752	0.133452	0.8938
F.SIZE t-1	0.050806	0.02596	1.95706	0.0503
PROFIT t-1	-0.00014	0.00011	-1.309135	0.1905
Ln R&D t-1	0.065961	0.03198	2.062902	0.0391
Mean dependent var	0.56742	S.D. dependent var		0.241997
Sum squared resid	31.53227	Log likelihood		10.91148
Akaike info criterion	-0.01397	Schwarz criterion		0.04013
Hannan-Quinn criter.	0.007155	Deviance		31.53227
Deviance statistic	0.05702	Restr. deviance		32.73657
LR statistic	21.12053	Prob(LR statistic)		0.001745
Pearson SSR	31.53227	Pearson statistic		0.05702

Dispersion	0.05702		

Table 6 results presented here show the impact of cash flow volatility and other control variables on capital structure being measured by total liability at book value. Cash flow volatility influenced capital structure positively and significantly. It means with an increase in cash volatility book value of the total liabilities will be increased to meet up the cash needs. The model was fit for predictions as well because pvalue was lower than 0.05. Furthermore, size was also positively and significantly related to capital structure. The large sized firms need more finance to meet their capital needs. Research and development expenses also showed positive and significant influence on capital structure. Other control variables showed insignificant relation with capital structure. Hypothesis 1 is accepted.

Table 7: Generalized Linear Model (Dependent Variable: GENR_LEV3)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.94768	0.74857	-1.265979	0.2055
VCF t-1	-0.00089	0.00083	-1.072466	0.2835
MTBR t-1	0.000103	0.0003	0.34526	0.7299
A.TAN t-1	0.015129	0.02575	0.587533	0.5568
F.SIZE t-1	-0.00294	0.04493	-0.065374	0.9479
PROFIT t-1	-7.73E-05	0.00028	-0.27576	0.7827
Ln R&D t-1	0.104479	0.04601	2.27072	0.0232
Mean dependent var	0.276678	S.D. dependent var		0.353576
Sum squared resid	68.85094	Log likelihood		-207.75
Akaike info criterion	0.766963	Schwarz criterion		0.821062
Hannan-Quinn criter.	0.788087	Deviance		68.85094
Deviance statistic	0.124504	Restr. Deviance		69.884
LR statistic	8.297341	Prob(LR statistic)		0.217119
Pearson SSR	68.85094	Pearson statistic		0.124504
Dispersion	0.124504			

The above table 7 shows the impact of cash flow volatility and other control variables on capital structure measured by total debt at market value. The variables had shown insignificant impact on capital structure except research and development expenses. Increase in research and development expenses will increase the total debt at market value. A company might take external loans to finance its growing needs of research and development. This model was not fitted for prediction as p value was greater than 0.05

Table 8: Generalized Linear Model (Dependent Variable: GENR_LEV4)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-1.36236	0.42599	-3.198152	0.0014
VCF t-1	0.000842	0.00028	3.048462	0.0023
MTBR t-1	0.000106	0.00013	0.804353	0.4212

A.TAN t-1	-0.02001	0.01604	-1.247787	0.2121
F.SIZE t-1	0.058818	0.02549	2.307832	0.021
PROFIT t-1	-7.10E-05	0.00012	-0.618456	0.5363
Ln R&D t-1	0.011458	0.03177	0.360614	0.7184
Mean dependent var	0.409608	S.D. dependent var		0.248298
Sum squared resid	32.9707	Log likelihood		-1.57877
Akaike info criterion	0.030638	Schwarz criterion		0.084738
Hannan-Quinn criter.	0.051763	Deviance		32.9707
Deviance statistic	0.059622	Restr. Deviance		34.46328
LR statistic	25.03426	Prob(LR statistic)		0.000337
Pearson SSR	32.9707	Pearson statistic		0.059622
Dispersion	0.059622			

The table 8 shows the influence of cash flow volatility and other control variables on capital structure being measured as total debt at book value. Cash flow volatility showed a positive and significant influence on capital structure. Cash flow variations here will cause total book value of debt to increase. Size was also positively and significantly related to capital structure. All other variables were insignificantly related to capital structure. Model was fit for predictions as p value was lower than 0.05.

Table 9: Generalized Linear Model (Dependent Variable: GENR_LEV5)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.524934	0.66121	0.793899	0.4273
VCF t-1	-0.00018	0.000353	-0.511951	0.6087
MTBR t-1	-0.000146	0.000326	-0.448496	0.6538
A.TAN t-1	-0.223827	0.300118	-0.745797	0.4558
F.SIZE t-1	-0.033044	0.040832	-0.809272	0.4184
PROFIT t-1	-2.29E-05	0.000152	-0.149993	0.8808
Ln R&D t-1	0.008467	0.048515	0.174522	0.8615
Mean dependent var	0.444713	S.D. dependent var		0.380907
Sum squared resid	80.45253	Log likelihood		-251.352
Akaike info criterion	0.922686	Schwarz criterion		0.976786
Hannan-Quinn criter.	0.943811	Deviance		80.45253
Deviance statistic	0.145484	Restr. Deviance		81.10521
LR statistic	4.486271	Prob(LR statistic)		0.611171
Pearson SSR	80.45253	Pearson statistic		0.145484
Dispersion	0.145484			

Results of influence of cash flow volatility and other control variables are presented in the table 9. Here capital structure was taken as long term only at market value. Not even a single variable showed significant impact on long term debts i.e.

capital structure. The model was not fitted for predictions as p value was greater than 0.05.

Table 10: Generalized Linear Model (Dependent Variable: GENR_LEV6)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.984621	0.604992	-1.627494	0.1036
VCF t-1	-0.000727	0.000506	-1.437197	0.1507
MTBR t-1	0.002985	0.003524	0.84713	0.3969
A.TAN t-1	-0.02108	0.019242	-1.095507	0.2733
F.SIZE t-1	-0.003092	0.036248	-0.085303	0.932
PROFIT t-1	-0.002875	0.003524	-0.815967	0.4145
Ln R&D t-1	0.032059	0.039255	0.816684	0.4141
Mean dependent var	0.25595	S.D. dependent var		0.270319
Sum squared resid	39.76602	Log likelihood		-54.0489
Akaike info criterion	0.218032	Schwarz criterion		0.272131
Hannan-Quinn criter.	0.239156	Deviance		39.76602
Deviance statistic	0.07191	Restr. Deviance		40.8473
LR statistic	15.03667	Prob(LR statistic)		0.019973
Pearson SSR	39.76602	Pearson statistic		0.07191
Dispersion	0.07191			

Table 10 shows the impact of cash volatility on capital structure by taking long term debt at book value. Control variables were also the part of the model. Cash flow volatility showed a negative and insignificant impact on capital structure. All other control variables showed insignificant impact on capital structure. Model showed fitness for predictions as p value was lower than 0.05.

9.3.   Cash flow volatility and Debt Maturity:

Table 11: Generalized Linear Model (Dependent Variable: GENR_LEV7)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.396814	0.341567	7.017119	0
VCF t-1	-0.000333	0.000172	-1.931959	0.0539
MTBR t-1	6.29E-05	9.75E-05	0.644913	0.5193
A.TAN t-1	0.006102	0.006436	0.948032	0.3435
F.SIZE t-1	0.036255	0.020473	1.770838	0.0771
PROFIT t-1	-8.44E-05	8.12E-05	-1.039193	0.2992
Ln R&D t-1	0.009685	0.025621	0.378006	0.7056
R-squared	0.016727	Mean dependent var		2.983929
Adjusted R-squared	0.006059	S.D. dependent var		0.823248
S.E. of regression	0.820751	Akaike info criterion		2.455226
Sum squared resid	372.5183	Schwarz criterion		2.509326
Log likelihood	-680.4634	Hannan-Quinn criter.		2.476351
F-statistic	1.567893	Durbin-Watson stat		2.473287
Prob(F-statistic)	0.154225			

The impact of cash flow volatility was inspected on debt maturity and it was done with the help of ordinary least square regression. The table 11 showed that cash flow volatility was negatively and significantly related to debt maturity. It implies that increase in cash flow volatility will affect debt maturity in negative way. Firm size showed a positive and significant impact on debt maturity. Market to book ratio, tangibility, profitability and research and development expenses showed insignificant impact on debt maturity. Durbin Watson stat was 2.47 and was in range of 1.5 and 2.5 so there was no problem of autocorrelation. R squared shows that independent variables explained 1.6% variations in debt maturity. Model was not that much fit for predictions as p value was greater than 0.05. Our second hypothesis is accepted.

10. Conclusion:

This study is designed to check that how cash flow volatility can affect capital structure and debt maturity of different Pakistani listed firms. Among all different measures of leverage the second measure in which we considered total liability as measure of leverage results are significant .which means that higher cash flow volatility. Which means 1 standard deviation in cash flow volatility leads 0.24 decrease in leverage.

We have used a relatively new measure of debt maturity to check the impact of cash flow volatility on debt maturity. Debt maturity was a categorical variable. Our model significantly and negatively predicted this relationship .which means one standard deviation in cash flow volatility decrease debt maturity by 0.82.our finding of this model suggest that firms should use debt of shorter maturity when having high cash flow volatility.

This research study present some findings which can be useful in the following ways. First those firms which are encountering high cash flow volatility can decrease their bankruptcy costs by decreasing their leverage levels in their capital structure or also by using debt of shorter maturity Second, we suggest that government ownership is a vital element which must be considered during decision making by the financial managers as it effects the firm's optimal capital structure. Finally, our findings will also be useful for the investors as they can analyze the risk level associated with different firm by looking at variability of cash flows before and leverage levels of firms before taking any investment decisions.

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Doublethink and Manipulation: Psychological Tyranny in Orwell's 1984

Muhammad Shadab Ilyas

Abstract

This academic paper explores the complex web of psychological manipulation orchestrated by Big Brother in George Orwell's 1984, examining the profound impact on individuals' psychology. Drawing from a watchful analysis of the novel and of diverse scholarly articles on Orwell's 1984, the theoretical framework integrates Hannah Arendt's "The Origins of Totalitarianism" and Dr. Robert Cialdini's "Influence: The Psychology of Persuasion." The primary objectives is to unknot the complex dimensions of Big Brother's influence, exploring how totalitarianism shapes belief systems, utilizing doublethink as a manipulative tool and how they successfully persuade psychology. The research investigates the shades of psychological persuasion and analyzes Big Brother's mechanism of control, authority, and obedience. Doublethink, Newspeak, telescreens, and pervasive surveillance acted as a tool to manipulate precisely the collective mindset of the dystopian society, shaping individual and collective consciousness. Show casing the complexities of mind control in Orwell's dystopian masterpiece.

Keywords: Totalitarianism, Manipulation, control, Doublethink, and, Psychological Tyranny.

1. Introduction

George Orwell wrote (1984) one of the most recognizable 20th century fiction. Orwell's *1984* is surely one of the best-known novels of the century. Since its publication in 1949, '1984' has attained widespread acclaim and has become a cornerstone of modern literature, inspiring numerous adaptations and scholarly analyses. Orwell's exploration of surveillance, propaganda, and the erosion of individual freedom has earned 1984 a permanent place in the literary canon and continues to resonate with readers around the world. It projects a negative utopia, or dystopia, of a future totalitarian society which uses terror, surveillance, and a repressive bureaucracy to exert total power over the individual(Kellner, 1984). The novel clearly portrays a society that resembles a camp of concentration where the powerful Party, dictators, unquestionably exercise illegal actions. Navleen Multani argues that Newspeak and Big Brother (omnipresent ruler) beat people into submission (Multani, 2020). Citizens are conditioned, brutally threatened, monitored and made to live in eternal fear without protest, against the ruling Bourgeoisie, where they merely exist and do not protest against totalitarian rule. According to Mattias Desmet, (2022) 'totalitarianism is not a coincidence and does not form in a vacuum(Desmet, 2022). It arises from a collective psychosis that has followed a predictable script throughout history. The political satire continuously read for its ideas on the totalitarian regime, earning the reputation of a social and political satire in the twentieth century of communist regimes. The narrative follows the life of Winston Smith, a low-ranking member of the Party, which led by the enigmatic figure known as Big Brother. As Winston rebellious activities discovered, he underdoes brutal re-education, by Thought Police. The novel culminates in protagonist's complete subjugation and acceptance of the Party's version of reality. Nineteen Eighty-Four discusses a communist's strategy to enforce its ideological and psychological control by brainwashing its opponents. In Orwell's dystopian masterpiece, "1984" filthy influence of Big Brother extends far beyond the realm of political control(Multani, 2020). The novel explore the danger of totalitarianism and the erosion of individual freedom. Published in 1949, the narrative can observed in the imagined future of 1984, in a super state known as Oceania. As due to Orwell's personal experience with the Spanish Civil war, 1984 reflects this period where he envisioned the dangers of absolute political authority, especially in a period of advanced technology where private space is violated through monitored screens, emotions are disregarded and made private and the lack of freedom in speech is common.(Kellner, 1984) This research paper analyses the manipulation of human mind by the effects of a totalitarian government. Based on Hannah Arendt's work "*The Origins of Totalitarianism*" (1951). Arendt illuminates the *elements* of totalitarianism(Kohn, 2002). She examined the political, social, and cultural conditions that allowed for the emergence of such oppressive system(Hannah Arendt, 1951) and Dr. Robert Cialdini's book "*Influence: The Psychology of Persuasion* (2011)"(Cialdini, 2011j). As it explores the six key principles of influence: reciprocity, commitment, social proof, authority, liking, and scarcity. These principles shed light on how peoples' mind can be

subtly influenced and manipulated in different social situations. It delves into the complexities of psychological manipulation and the insidious concept of Doublethink, a society entrapped by a totalitarian regime that not only dictates its citizen's action but also their very thoughts. This research aims to dissect the psychological tyranny imposed by Big Brother, exploring the multifaceted nature of mind manipulation and the consequential societal ramifications depicted in Orwell's prophetic narrative. Through an in-depth analysis of the novel's characters and the narrative techniques, this study seeks to unravel the disturbing complexities of a world where truth is elusive, and individual autonomy is sacrificed at the altar of collective obedience(Conlin, 2017). As we goes through, the parallels between Orwell's fictional narrative and sociopolitical landscape becomes all the poignant, promoting critical reflections on the fragility of freedom and the implications of unchecked power over human psyche. The dehumanized society of 1984 is just such a world where the machine has triumphed over man and mechanical over human values.

The statement below is true
The statement above is false(Polonsky, 2011).

As Jamie Brown and Robert West says George Orwell coined the term 'doublethink' to refer to the act of holding contradictory views in different contexts(Brown, 2014). Doublethink is a manipulation mechanism by which people come to think two contradictory things at the same time, without even realizing it. In totalitarian countries propaganda and terror present two sides of the same coin (Hennah Arendt, 1951c). In the novel Orwell stats that "DOUBLRTHINK means the power of holding two contradictory beliefs in one's mind simultaneously, and accepting both of them"(Orwell, 1949i). This perspective not only highlights the oppressive control by the regime but also underscores the extent to which the human mind can be conditioned to embrace conflicting ideologies. The Party slogans are one of the clearest examples of doublethink. 'The Party says the earth is flat', 'the Party says that ice is heavier than water'—and trained himself in not seeing or not understanding the arguments that contradicted them'(Orwell, 1949j). It purports that one thing is another, even though those reading/hearing slogan now mean something else.

<div align="center">
WAR IS PEACE
FREEDOM IS SLAVERY
IGNORANCE IS STRENGTH(Orwell, 1949k).
</div>

The phrase "war is peace" suggests that pursuing war is going to bring about peace. This feels wrong at first glance but seen as through Oceania's war with Eurasia/Eastasia. Turning their citizens' attention to the war and a clear enemy keeps them from focusing on who the true enemy is. The second element, "freedom is slavery," is even more evocative. Again, it seems false and contradictory at first. Winston knows that Oceania has been at war with both superstates but the Party presents it as one unending war that has never changed. 'He, Winston Smith, knew that Oceania had been in alliance with Eurasia as short a time as four years ago. But where did that knowledge exist? Only in his own consciousness, which in any case must soon be annihilated'

(Orwell, 1949l). Doublethink prevails since the novel allows no grounds for opposition besides Winston's metaphysical quest. Unlike other dystopias, this novel reduces fellowship to just another fantasy concocted and perpetuated by the Party. Winston says that, "If there is hope, it lies in the prols"(Orwell, 1949b). The idea as the cornerstone of the Party's psychological apparatus it encapsulates the ability and simultaneously hold antagonistic beliefs and accepts as true. One who controls evidence controls information itself. "If one is to rule, and to continue ruling, one must be able to dislocate the sense of reality"(Orwell, 1949i). 'Totalitarian movements struggling for power can use terror to a limited extent only and share with other parties the necessity of winning adherents' (Hennah Arendt, 1951e). The goal of power was to get people to accept as true what was false. Therefore, the Party chooses what is true and what isn't. It is what makes them so powerful. The masses have to be won by propaganda (Hennah Arendt, 1951e). 'Only statements that can be proven by evidence are believed'(Cinakli, 2021). In world Of Orwell the concept of evidence becomes distorted and subverted, as the Party fabricates and altars facts to suit its agenda. "The ministry of Plenty's forecast had estimated the output of boots for the quarter at 145 million. The actual was given as sixty-two million... half of the population of Oceania went barefoot"(Orwell, 1949m). Language is the unique human talent that works amazingly in molding one's thoughts and deeds(Hossain, 2018). Citizens, like Winston and Julia, are not encouraged to seek evidence or question the official narrative; instead they are subjected to a form of mind manipulation where contradictory information is erased, and unquestioning acceptance of Party-approved truths is demanded. In the narrative O'Brien says to Julia 'You, comrade'—he bowed his head to Julia—'will leave first'(Orwell, 1949o).

The novel succinctly portrays a society reminiscent of a concentration camp, where the authoritative Party ruthlessly engages in unlawful actions. In the narrative when 'O'Brien says that two and two can equal five, or Oceania's ruling Party announces great improvements in chocolate production realist claims that, like Swift's Houyhnhnms, the Party shows a horrifying desire for power and domination, not a commitment to a rational society(Goldstein, 2000). "It was always at night_ the arrest invariably happened at night... in the vast majority of cases there was not trails, no report of arrest. You were abolished, annihilated: VAPORIZED was the usual word"(Orwell, 1949q). Citizens systematically conditioned and compelled to exist in perpetual fear, devoid of any inclination to resist the totalitarian rule. "No one who has once gone astray is ever spared... we shall crush you down to the point from which there is no coming back"(Orwell, 1949r). When a male animal acts to defend his territory, for instance, it is the intrusion of another male of the same species that cues the territorial-defense tape of rigid vigilance, threat, and, if need be, combat behaviors(Cialdini, 2011i). Orwell's work claimed that to do this, lies must be told and believed sincerely. Also, the thing not convenient to remember should be forgotten and only brought back from memory when it is considered as appropriate for utilization(González, 2022). They merely endure their existence, suppressed and voiceless. The political narrative, renowned for its timeless relevance, emerges as a social and political satire of the twentieth century, drawing

parallels with the Russian and Italian communist regimes. 1984 delves into the strategies employed by a communist ideology to impose both ideological and psychological control through the indoctrination of its adversaries. "How could you appeal to the future when not a trace of you, not even an anonymous word scribbled on a piece of paper, could physically survive?"(Orwell, 1949v). The novelist skillfully captures his encounters with a totalitarian regime, ominously referred to as the Party. This influences profoundly impacts the protagonist, Winston, resulting in a profound sense of alienation on personal, interpersonal, and societal levels. The novel stands as a poignant exploration of the perils associated with absolute power and the erosion of individual autonomy under the weight of a controlling regime. For Orwell, Nature was essentially good and technology essentially evil. Technology in 1984 is used to enslave men, not liberate them. The telescreen, the speakwrite, the helicopter, the versificators that compose the songs sung by the proles, the book-writing machine on which Julia labors, and all the rest of the technological paraphernalia of the novel exist only to aggrandize the power of the state and violate human nature. As George M. Enteen has said, 'Shakespeare was wrong, we are told, in seeing art as a mirror held up to nature. Far more oblique is the relationship between art and life: a deep structure combining subjective intention, universal archetypes, and cultural myths'(Enteen, 1984b). Where in the novel the government manipulates truth and control perception, Orwell may be suggesting that art serves as a more hairsplitting tool. The novel itself acts as a deep structures, weaving together the author's intentions, universal themes of power and oppression, and the cultural concept of society.

In this respect, the novel depicts a society that resembles a concentration camp with its illegal acts that is dominantly exercised by the, corrupt, Party. The citizens are conditioned, monitored and made to live in eternal fear without protest. They merely exist and submit to the totalitarian rule. Therefore, it suggests a bleak future where people are deprived to live a decent life and lose their social identity. The citizens are monitored and conditioned through powerful methods. They live in constant perennial fear that make them obey and avoid thinking or questioning motives and principles of the Party. The motive of the government is to retain power by making people refuse to think independently. Accordingly, this research analyses extensively on the characters Winston, Julia, and O' Brien by adopting the concept of Totalitarianism by Hannah Arendt (1951) a political theorist of the 20th century and the Psychological Manipulation by Dr. Robert Cialdini (2011) a social psychologist, the study focuses on the concept of Mind Manipulation of characters by exercising totalitarian dictatorship.

2. Literature review

As Orwell's narrative unfolds, the presence of Big Brother becomes synonymous with the erosion of individual autonomy, employing sophisticated tactics of mind manipulation and fostering a culture of Doublethink. George Orwell singled out doublethink as the most important resource for undermining human freedom within totalitarian societies the one in 1984(Martin, 1984b). In terms of the novel, however, these other weapons in the totalitarian arsenal serve to support the more fundamental goal of

encouraging wide spread and systematic use of the irrational thought process. Orwell memorably dubbed "doublethink": Ultimately it is by means of doublethink that the Party has been able to arrest the course of history. Multani, Navleen argues that Orwell's Nineteen Eighty-Four (1984) is about a totalitarian technological state, Oceania. Ingsoc, the ruling party, believes in the 'sacred principles' of 'Newspeak,' 'doublethink' and the mutability of the past (Multani, 2020). Ingsoc utilizes technology to subjugate individuals. It deploys scientific progress such as spacecraft, teleportation devices, speech recorders, automated novel-writing devices, levitating strongholds, poetry generators, concealed audio devices, voice recorders, aerial patrols, interrogation tools, memory voids, and synthetic fertilization for monitoring and domination. It follows that we can understand Orwell's novel and his vision of the threats to freedom only if we can understand doublethink. "Even to understand the word 'doublethink' involved the use of doublethink" (Orwell, 1949w). Gary Lupyan and Benjamin Bergen (2015) has put emphasizes that there are certain distinguished forms of diction that constitute the core of the language and act solely on programming human mind(Gary Lupyan, 2015). 'The decline of a language…have political and economic causes' (Orwell, 1946). The link between language and power has been exposed masterfully. "We're cutting the language down to the bone. The Eleventh Edition won't contain a single word that will become obsolete before the year 2050" (Orwell, 1949x). 'An absolute system of containing thought and imagination of people. The Party treats people as though they were nothing but playthings at its hands'(Hossain, 2018). "It was terribly dangerous to let your thoughts wander when you were in any public place or within range of a telescreen" (Orwell, 1949z). Richard Oxenberg argues that 'Doublethink supports, by systematically, diverting the psyche away from any recognition of anything that would call its self-serving constructions into question'. "True to the Principles of doublethink, the Party taught that the proles were natural inferiors who must be kept in subjection, like animals, by the application of a few simple rules" (Oxenberg, 2021). Psychologist Daniel Goleman, in his book "Vital Lies, Simple Truths: The Psychology of Self-Deception" (1985) gives a detailed account of the strategies the psyche can employ so as not to notice what it itself is doing (Goleman, 1985). The self-deceiving psyche will fabricate self-satisfying narratives that it will then, quite deliberately, refuse to scrutinize. It will selectively perceive whatever reinforces its beliefs and selectively ignore whatever does not, and then conceal from itself the fact that it is doing so. 'The essential act of the Party is to use conscious deception while retaining the firmness of purpose that goes with complete honesty' (Orwell, 1949i). Mike W Martin asserts that Orwell, it seems to me, has identified this important area of overlap in the general approaches to understanding human beings and their beliefs (Martin, 1984b). He is urging that Marxism without attention to the vast human capacity for self-deception cannot make sense of how governments shape public opinion. 'To keep them in control was not difficult. A few agents of the Thought Police moved always among them, spreading false rumours and marking down and eliminating the few individuals who were judged capable of becoming dangerous'(Orwell, 1949ab). In a website 'Psychology & Neuroscience' It is said that in George Orwell's 1984, a great deal of space is devoted to explaining "Double-think," part of The Party's method of

"reality control."(Neuroscience, 2024) The Party intellectual knows in which direction his memories must be altered; he therefore knows that he is playing tricks with reality. Preston Ni in his analysis '14 Signs of Psychological and Emotional Manipulation' asserts that 'Manipulative people may let the other person speak first and ask questions in order to assess that person's weaknesses' (Ni, 2015). We have observed the phenomena, in the narrative, when O' Brien manipulate Winston by knowing what he want to do, he let him to tell his opinion "Shall I say it, or will you?' he said. 'I will say it,' said Winston" (Orwell, 1949ai). We have assumed that one of the characteristics of manipulation, for instance as distinct from persuasion, is that it involves power and domination. The term 'power' would be taken to represent something in the world (Clegg, 20 March 2013). An analysis of this power dimension involves an account of the kind of, control that some social actors or groups exercise over others (Clegg, 20 March 2013). We also have assumed that such control is first of all a control of the mind, that is, of the beliefs of recipients, and indirectly a control of the actions of recipients based on such manipulated beliefs. "All the beliefs, habits, tastes, emotions, mental attitudes that characterize our time are really designed to sustain the mystique of the Party and prevent the true nature of present-day society from being perceived" (Orwell, 1949aj). Manipulation may affect social representations in many ways, both as to their contents as well as to their structures (Van Dijk, 2006). Abbott Gleason (1984) in his "Totalitarianism in 1984" describes that the arrival of 1984 has brought us a milestone that we do not know how to celebrate but cannot ignore (Gleason, 1984). One reason for this that 1984 was a generational nightmare. The political consequences of high technology for our theme arguing that the cautionary meanings of the book maybe stretched to include advertising and mass consumption. If there were such a thing as an 'age of totalitarianism', 1984 would be one of its seminal books. The notion of an "unperson" and the idea of a "memory hole" have become standard terms in our language. As a novelist, Orwell exaggerated and simplified the mechanisms for controlling the past.(Enteen, 1984a) 'When one knew that any document was due for destruction… it was an automatic action to lift the flap of the nearest memory hole and drop it in'.(Orwell, 1949ak) They are used when someone need to throw away, permanently, something Big Brother/ the Party wants to be censored. More commonly, the phrase is related to politics and may be used when someone appears to be attempting to erase the public's memory of an event. This may include erasing embarrassing images and messages (Baldwin, 2024b). As soon as Winston had dealt with each of the messages. Then he… dropped them into the memory hole to be devoured by the flames (Orwell, 1949al). This image of fire destroying the truth provides a powerful image of control of government. This government is not just controlling its citizens; it is literally rewriting the history of the world as they know it to be more in line with its own goals (Hansen, 2019). The essay 'The Dynamics of Terror in Orwell's '1984' by Malcolm R Thorp (1984), explore the methods of totalitarian control envisioned in Orwell's famous anti-utopian projection into the future of world politics (Thorp, 1984). In many ways, 1984 was a logical culmination of Orwell's career as a political writer and the book illustrates his belief that since the 1930s political behavior had become increasingly irrational.

Through a clear analysis of relevant literature, this review aspires to contribute to a deeper understanding of the psychological dynamics at play in Orwell's dystopian world. This review aim to critically assess the current state of knowledge, drawing on insights from different works to display the intricate mechanism through which Big Brother' regime influence and mold the thoughts, beliefs, and behaviours of the society it subjugates.

3. Significance of the Research

After examining the specific aspects of mind manipulation and doublethink within '1984,' it is important to reflect on the significance of this focused approach. By delving deeply into these particular themes, we have been able to uncover clear insights and connections that contribute to the understanding of Orwell's dystopian vision. Focusing on specific aspects allows for a more thorough analysis of key concepts, shedding light on their implications for individual autonomy, societal control, and the power dynamics within the narrative. This targeted approach enables us to draw clear conclusions and make meaningful interpretations.

4. Methodology

This research employs a comprehensive methodology to analyze the psychological tyranny depicted by Big Brother in George Orwell's "1984," with a specific focus on mind manipulation and doublethink. Drawing on insights from scholarly sources, including "Doublethink, Manipulation, and Creativity" (2017) and Jabeen Begum's work on manipulation (2023), the study begins by defining and contextualizing these concepts within the novel's narrative. The theoretical framework further enriched by integrating Hannah Arendt's "Origins of Totalitarianism" and Robert Cialdini's "Influence: The Psychology of Persuasion." Arendt's insights into totalitarian regimes provide a foundation for understanding the broader sociopolitical context, while Cialdini's psychological principles offer a lens through which to dissect the cognitive and emotional dimensions of mind manipulation within the Party's control mechanisms. By synthesizing Orwell's narrative with Arendt's and Cialdini's theories, the research aims to provide a logical and comprehensive framework for examining the complex dynamics of political power, psychological manipulation, and the pervasive influence of Big Brother in "1984" (Arendt, 1951; Cialdini, 1984; Orwell, 1949).

5. Results and Discussion

In the Result and Discussion section, we delve into what we have learned about how Big Brother messes with people's minds in "1984." Our literature review uncovered the subtle ways Big Brother uses mind manipulation and Doublethink to control society. This section analyzes the patterns and contradictions and aim to get a clearer picture of how Big Brother's regime influences the way people think. This part of the paper is like connecting the dots. Showing the impact of mind control in Orwell's world by the theoretical work from Hannah Arendt's *"Origins of Totalitarianism,"* underpinnings of

totalitarian regimes and their impact on individual autonomy and by incorporating Robert Cialdini's *"Influence: The Psychology of Persuasion,"* the utilization of psychological principles to dissect the cognitive and emotional dimensions of mind manipulation.

5.1. Doublethink: A Manipulation

As in *George Orwell's 1984* by Navleen Multani it's clear that George Orwell's harrowing experiences of war, understanding of imperialism and aesthetic enthusiasm orient him to produce work of art that exposes lies and injustice (Multani, 2020). The term "doublethink," as seen in George Orwell's '1984,' is used to describe one's capacity to hold two contradictory beliefs at one time.(Baldwin, 2024a) Doublethink is a psycho-cognitive strategy that enables the duplicitous mind to conceal from itself its own duplicity (Oxenberg, 2021).

A situation in which someone seems to believe two opposite things, or claims to believe something but does the opposite.("Doublethink: Meaning of Doublethink in English," 2024) Doublethink was a form of social indoctrination in which subjects are expected to simultaneously accept two conflicting beliefs as truth ("Doublethink," 2024). Doublethink was a concept introduced by George Orwell in his novel, 1984…The term is used several times throughout the novel and is experienced by multiple characters. It is also one of the three most important principles of INGSOC along with the mutability of the past and Newspeak (Baldwin, 2024a). George Orwell in his narrative stats that 'Doublethink means the power of holding two contradictory beliefs in one mind simultaneously and accepting both of them' (Orwell, 1949i). In the world of 1984 'even to understand the word 'doublethink' involved the use of doublethink' (Orwell, 1949w). Orwell's work claimed that to do this, lie must be told and sincerely believed. As George Orwell he himself has said that "if thought corrupts language, language can also corrupt thought" (Orwell, 1946). Also, what isn't convenient to remember should be forgotten and only brought back from memory when appropriate (González, 2022). Mike Martin argues that George Orwell singled out doublethink as the most important resource for undermining human freedom within totalitarian societies (Martin, 1984b).

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WAR IS PEACE

FREEDOM IS SLAVERY

IGNORANCE IS STRENGTH (Orwell, 1949k).

</div>

George Orwell had used the phrase as Party's slogans. This encapsulates the concept of doublethink, a crucial element in the Party's manipulation of reality and control over its citizens. The invention of print made it easier to manipulate public opinion, and the film and the radio carried the process further' (Orwell, 1949ap). A state of perpetual war keeps the citizens united against a common enemy. In the novel readers are told that 'the Ministry of Peace, which concerned itself with war' (Orwell, 1949k). But the actual scenario is 'Winston could not definitely remember a time when his country had not been at war, but it was evident that there had been a fairly long interval of peace during his childhood (Orwell, 1949aq). Inside the narrative citizens are conditioned to

believe that their oppressive living conditions are the results of a necessary war effort. 'War had been literally continuous, though strictly speaking it had not always been the same war' (Orwell, 1949as). George M Enteen, says that "Orthodoxy means not thinking not needing to think. Orthodoxy is unconsciousness." (Enteen, 1984a). The Party's control over its citizens through conformity and unquestioning acceptance of its ideology. As scholars have said the 'war means on more than a continuous shortage of consumption of goods' (Orwell, 1949a). 'Oceania had been at war with Eastasia and in alliance with Eurasia… Oceania was at war with Eurasia: therefore Oceania had always been at war with Eurasia' (Orwell, 1949l). What the Party tell their citizens, the people say 'yes'. Doublethink gives the citizens the ability to not only hold two contradictory thoughts in their mind at the same time but also simultaneously believe that they are both true. This allows the Party to be able to manipulate historical evidence and know that no matter what they say, the citizens will believe it is the truth. Without doublethink, Big Brother or the Party would not be able to keep the people of Oceania under their control.("Examples of Doublethink in 1984 by George Orwell," 2024) According to the narrative of doublethink '*War is Peace'* but 'the Party add nothing to the wealth of the world, since whatever they produced is used for the purpose of war' (Orwell, 1949c). However, the essential act of war is destruction, not necessarily of human lives, but of the products of human labour. War is a way of shattering to pieces, or pouring into the stratosphere, or sinking in the depths of the sea' (Orwell, 1949d). As we believe that 'questioning is the use of effective questions, either planned or incidental, to confirm and develop knowledge and understanding. An effective question is the start of a constructive dialogue' ("Questioning," 2024). 'Questions give them a sense of ownership'.(Gurinder Singh, 2019) But in 1984 *Ignorance is strength* and 'the splitting of the intelligence which the Party requires of its members, and which is more easily achieved in an atmosphere of war, is now almost universal' (Orwell, 1949e). According to Natalie Frank the Party develops this ability in its citizens by undermining their individuality, independence, and autonomy by creating an environment of constant fear through propaganda (FRANK, 2023). The war serves as a tool for the Party to consolidate power. Justify its oppressive policies, and keep the citizens in a constant state of fear and obedience but 'It should be noted that the fighting never really moves beyond the edges of the disputed area' (Orwell, 1949c). A state of constant war demonstrates that people are sacrificing for the greater good of the society, pledging their effort and money to the war, and devoting themselves to their country and government (FRANK, 2023). Ultimately the entire war is spurious and is either not happening for the purposes quite other than the declared ones: but such knowledge is easily neutralized by the techniques of DOUBLETHINK' (Orwell, 1949f). The goal of defending its power by preventing new ideologies is the first and most important reason why the Party is obsessed with fostering and monitoring doublethink (Martin, 1984a). 'In our society, those who have the best knowledge of what is happening are also those who are furthest from seeing the world as it is' (Orwell, 1949g). The power control of the Party over Oceania is built on a foundation of absolute reality. Doublethink acts as a safeguard against the development of dissenting ideologies and diversification of thought that could lead to the formation of

alternative ideologies. The absences of divergent contributes to a controlled and stable environment that serves the party.

5.2. Psychological Persuasion

In Nineteen Eight Four Cialdini's principles, woven in the Party's regime, can analyze the psychological dynamics of Doublethink and Mind manipulation. We know that 'Manipulation is widespread (if not to say pervasive) in all areas of human life'(Rinofner-Kreidl, 2016). As Jonas Koblin stats that the principles of persuasion are a set of psychological rules to influence others (Koblin, 2023). In the book "*Influence: The Psychology of Persuasion*", Robert Cialdini outlines six main principles: Reciprocity, scarcity, authority, consistency, liking and consensus. He later added a 7th principle, unity. In context of totalitarianism, psychological persuasion operates a potent tool for control. The collaborator and confessor were "brainwashed". The word itself has become popular as a term for all sorts of persuasion and as explanation for any behaviour which we do not understand (Schein, 1959). In a totalitarian government 'everyone is washed clean' (Orwell, 1949h). 'People simply like to have reasons for what they do' (Cialdini, 2011i), as citizens feels obliged to contribute to the collective surveillance for their own safety, the fear of punishment or the desire to be perceived as loyal. In the dystopian world, "You get what you pay for"(Cialdini, 2011f) citizens pay for their perceived safety the surrender of their personal autonomy and truth. We know that, 'Stereotyped behavior is prevalent in much of human action' (Cialdini, 2011h) individual conform to establish a pattern of behavior and societal expectations like Daily Routine, Uniformity in Thought, Two Minutes Hate, and Fear of Deviation. The Party 'we make the brain perfect before we blow it out' (Orwell, 1949h). In the dystopian society it will generally be found that "the writer is some kind of rebel, expressing his private opinions and not a 'party line" (Orwell, 1946). A group of people who know very well where the weapons of automatic influence lie and who employ them regularly and expertly to get what they want (Cialdini, 2011g). In society when everybody thinks alike, nobody will think at all.(Arnold-Forster, 2023) Conformity is a powerful force that narrows the thought patterns of groups and individuals. Robert Cialdini says that 'each of us has been taught to live up to the rule, and each of us knows about the social sanctions and derision applied to anyone who violates it' (Cialdini, 2011e). The indoctrination of children through organizations like the Junior Spies displays the Party's efforts to mold young minds into adhering a specific set of beliefs and behaviors. In the novel 'thoughtcrime is a dreadful crime' (Orwell, 1949n). Robert Cialdini argues that 'few people would be surprised to learn that, as a rule, we most prefer to say yes to the requests of someone we know' (Cialdini, 2011d).

Societies derive a truly significant competitive advantage from the reciprocity rule (Cialdini, 2011e). If you give something to someone. It makes them more open to being influenced by you. This is because we don't like to feel that we owe someone and so we want to return the favor to clear our social debt. O'Brien told Winston 'We shall meet in the place where there is no darkness.' (Orwell, 1949p). Winston's interactions with

O'Brien, demonstrate elements of reciprocation, creating a sense of trust. According to Robert Cialdini 'Scarcity the Rule of the Few'… Opportunities seem more valuable to us when their availability is limited (Cialdini, 2011k). The psychological impact involves the influence on the consciousness and feelings. It is easier to resist at the beginning than at the end (Cialdini, 2011c). In the dystopian world of Nineteen Eighty Four 'Once a stand had been taken, the need for consistency pressured these people to bring what they felt and believed into line with what they had already done. In the case of Winston and Julia when there crime was spotted, after giving them treatment they brought everything out and after that they 'don't feel the same towards the other person any longer' (Orwell, 1949s). The slogan of the Party which is 'Who controls the past controls the future; who controls the present controls the past (Orwell, 1949t) shows its conscious attempt to regulate history. According to George Orwell, 'A man may take to drink because he feels himself to be a failure, and then fail all the more completely because he drinks. Winston felt he had failed to come up with the struggle and 'he picked up his glass and drained it at a gulp. As always, the gin made him shudder and even retch slightly' (Orwell, 1949u) 'We all fool ourselves from time to time in order to keep our thoughts and beliefs consistent with what we have already done or decided' (Cialdini, 2011b). Power of the consistency have long been by the Psychologists to understand the principle to direct human action. To understand why consistency is so powerful a motive, it is important to recognize that in most circumstances consistency is valued and adaptive. Robert Cialdini states that 'Inconsistency is commonly thought to be an undesirable personality trait' (Cialdini, 2011a).

5.3. Totalitarianism's Effects on Belief System

Societies were founded, cohere, develop, degenerate and die based on their belief systems (J. L. Usó-Doménech & J.-A. Nescolarde-Selva, 2016). 'A strong feeling that something/somebody exists or is true; confidence that something/somebody is good or right' ("Definition of Belief from the Oxford Advanced Learner's Dictionary," 2024). Hannah Arendt described totalitarianism as the existence of a state without laws (Wiener, Steve. 2023). Arendt focuses on how totalitarianism transforms ideological systems of belief into deductive principles of action.(Kohn, 2002) 'It was only after a decade of national wars, civil wars, revolutions, and counter-revolutions in all parts of the world that Ingsoc and its rivals emerged as fully worked- out political theories. But they had been foreshadowed by the various systems, generally called totalitarian' (Orwell, 1949y). The narrator of the novel illustrate the policy of totalitarianism like, we know that 'the relationship between propaganda and indoctrination usually depends upon the size of the movements on one hand, and upon outside pressure on the other' (Hennah Arendt, 1951h). According to J. Harry Wray 'constraint and organization are very nearly the same thing' (Wray, 1979). The idea that could align with the oppressive and highly controlled society depicted in the novel. Knowing a specified attitude is helpful in predicting further ideas and attitudes' (Wray, 1979). Just as Winston had said to O'Brien that 'Five! Five! Five!' (Orwell, 1949aa). He was forced to accept the Party's version of reality forsaking his own belief. He was in fear that if I didn't said what he

wanted to be heard then the situation would have got strange. We know that 'belief systems are the stories we tell ourselves to define our personal sense of Reality' (J. L. Usó-Doménech & J. Nescolarde-Selva, 2016). Contradiction play a big role in Doublethink ("Contradictions In George Orwell's 1984," 2024). Because a member of the Party is expected to accept two beliefs that contradict each other at the same time, and they have control the direction in which their memories should be altered'. 'Doublethink satisfies the needs of the Party' ("Contradictions In George Orwell's 1984," 2024). The concept of individual beliefs is systematically dismantle through the manipulation of language, censorship, and constant surveillance. In a totalitarian government 'a Party member is expected to have no private emotions and no respites from enthusiasm' (Orwell, 1949ac).

Citizens are compelled to conform to the Party's version of reality, eliminating the freedom to create personal narratives. 'All that required of them was a primitive patriotism which could be appealed to whenever it was necessary to make them accept longer working-hours or shorter rations' (Orwell, 1949ad).

The 'decadence of our language is probably curable' (Orwell, 1946) but the by the control of The Party over information 'it was expected that Newspeak would have finally superseded Oldspeak…by about the year 2050' (Orwell, 1949ae). And in our world there will be no emotions except fear, rage, triumph, and self-abasement (Orwell, 1949af) thought eradicates the individual's ability to shape their own belief system. In 'Nineteen Eighty Four' narrator elaborates that 'A Party and attitudes demanded of him are never plainly stated, and could not be stated without laying bare the contradictions inherent in Ingsoc'(Orwell, 1949ag). After re-education and brainwashing 'he traced with his fingers in the dust on the table:

2+2=5 (Orwell, 1949ah).

According to Lumanyano Ngcayisa (2018) Arendt further states the popularity and victory of the leaders is based on masterful propaganda, over ignorance and stupidity(Ngcayisa, 2018). The Party 'at first used chiefly antisemitic propaganda to win firmer control of the population' (Hennah Arendt, 1951f). The emerging political systems were foreshadowed by earlier systems characterized by absolute control and authority. The passage implies that Ingnoc's rise to power is rooted in a historical context of global upheaval and the emergence of authoritarian ideologies. According to Arendt propaganda was a key factor of totalitarianism. 'Only the mob and the elite can be attracted by the momentum of totalitarianism itself; the masses have to be won by propaganda' (Hennah Arendt, 1951a). The essential point is that 'the necessities for propaganda arc always dictated by the outside world and that the movements themselves do not actually propagate but indoctrinate' (Hennah Arendt, 1951g). For seeking the attention of the people the Party announced that 'Oceania was not after all at war with Eurasia. Oceania was at war with Eastasia. Eurasia was an ally' (Orwell, 1949am). This was all the propaganda for acquiring. The 'Party' seeks that the proles are not human beings (Orwell, 1949an) to maintain control and suppress any potential rebellion. It is a manifestation of the dehumanizing propaganda used to manipulate and

control the population in the dystopian world. "Three months later FFCC had been suddenly dissolved with no reason given" (Orwell, 1949ao). According to Britannica under totalitarian rule, traditional social institutions and organizations are discouraged and suppressed (Duignan, 2024). 'A few agents of the Thought Police moved always among them, spreading false rumours and marking down and eliminating the few individuals who were judged capable of becoming dangerous' (Orwell, 1949ab). Thus, the social construct is weakened and people become more amenable to absorption into a single, unified movement. Bourgeoisie had produced apathy and even hostility toward public life (Hennah Arendt, 1951b). When a male animal acts to defend his territory, for instance, it is the intrusion of another male of the same species that cues the territorial-defense tape of rigid vigilance, threat, and, if need be, combat behaviors (Cialdini, 2011i). 'If you are a man, Winston, you are the last man. Your kind is extinct; we are the inheritors. Do you understand that you are ALONE?'...And you consider yourself morally superior to us, with our lies and our cruelty?' (Orwell, 1949ar). The totalitarian ruler must, at any price, prevent normalization from reaching the point where a new way of life could develop (HEnnah Arendt, 1951d). In a totalitarian state, the police operate outside the constraints of laws and regulations, and their actions are purposefully unpredictable (Duignan, 2024). George Orwell had cleared the idea of thought police in a totalitarian government as 'No one who had once fallen into the hands of the Thought Police ever escaped in the end. They were corpses waiting to be sent back to the grave' (Orwell, 1949at). In a totalitarian enclosure the masses are either directly or indirectly 'control through the use of terror and intimidation by the police' (Steve Wiener, 2023). Hannah Arendt in "The Origins of Totalitarianism" concludes that the paradox of totalitarianism in power is that the possession of all instruments of governmental power and violence in one country is not an unmixed blessing for a totalitarian movement (HEnnah Arendt, 1951d).

6. Conclusion

In conclusion, this research lightened-up the profound psychological impact of Big Brother's tyranny in George Orwell's 1984. Past studies have tackled the issue from different perspectives where different scholars have different analyses and findings. What makes this study different is that the link between regime and its manipulation on society. Therefore, this paper studies Hannah Arendt's insights from "The Origins of Totalitarianism" and Dr. Robert Cialdini's principles outlined in "Influence: The Psychology of Persuasion" provides a robust theoretical framework. In totalitarian regime where everything is under control: the family, individual, sex, thoughts, emotions, feelings and history, through an extensive exploration of the novel and relevant scholarly articles, the study elucidates the far-reaching consequences of Big Brother's manipulative tactics. Totalitarianism's influence on belief systems, the insidious nature of doublethink as a tool of manipulation, and the intricate dynamics of psychological persuasion emerge as central themes. The orchestrated use of doublethink, Newspeak, telescreens, and patrols underscores the meticulous strategies employed by

Big Brother to control minds. This research contributes to our understanding of the interplay between authoritarian power structures and individual psychology.

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Psychosocial Environment, Burnout and Work Wellness among Physicians: Testing the Health Impairment Process of the Job Demands-Resources Theory

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Abstract

Physician wellness is complex and multifaceted; individual, professional, and organizational factors might affect it. The demanding nature of the healthcare profession places physicians at an increased risk of burnout, adversely affecting their well-being and the quality of patient care. The present research investigates the intricate relationship between psychosocial demands, burnout, and work wellness in physicians, utilizing the framework of the Job Demands-Resources Theory. Specifically, the study aims to test the Health Impairment Process, examining how psychosocial demands within the healthcare profession may lead to burnout and subsequently impact overall work wellness among physicians. The sample consisted of 251 medical doctors (n =102 women, n = 149 men). Copenhagen psychosocial questionnaire (COPSOQ; Psychosocial Department, National Institute of Occupational Health, Copenhagen, Denmark, 1997), Oldenburg burnout inventory (OLBI; Demerouti, Bakker, & Nachreiner, 1998), and the perceived wellness survey (PWS; Adams et al., 1997) were used for assessment of study variables. Pearson product-moment correlation revealed a positive relationship between psychosocial demands and burnout whereas psychosocial demands and burnout were negatively related to the well-being of physicians. Further, the model testing analysis showed that burnout mediates the relationship between psychosocial demands and diminished work wellness among physicians. The empirical support for the health impairment process underscores the need for targeted interventions addressing psychosocial demands to mitigate burnout and enhance overall work wellness. By pinpointing specific stressors and their impact on physicians, this study offers valuable insights for developing evidence-based strategies to promote a healthier work environment in the medical field.

Keywords: psychosocial demands, burnout, work wellness, physicians, job demands-resources theory

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1. Introduction

According to the WHO, one of the biggest current challenges is improving the health of workers and managing the psychosocial factors in the work environment (Dutheil et al., 2019). Psychosocial work factors include job demands (e.g., high work pace, high requirements) and job resources (e.g., control at work, support from co-workers and supervisors). Psychosocial work factors (job demands & job resources) have a role in burnout and work wellness (Bakker & Costa, 2014; Upadyaya et al., 2016). Therefore, this research aimed to explore the role of psychosocial factors in wellness of physicians taking burnout as the mediating mechanism.

Job demands refer to those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs (Bakker & Demerouti, 2007; Demerouti et al., 2001). Examples included quantitative demands, work pace, and emotional demands. On contrary, job resources refer to those physical, psychological, social, or organizational aspects of the job that are functional in achieving work goals, reducing job demands and the associated physiological and psychological costs, or stimulating personal growth, learning, and development (Bakker & Demerouti, 2007; Demerouti et al., 2001). Examples included decision authority, skill discretion, role clarity and social support.

As per the Job Demands-Resource (JD-R) theory job demands and resources initiate two processes, such as a health-impairment process and a motivational process (Bakker & Demerouti, 2017). The former is of special interest for this study. In the health-impairment process, burnout is taken as an intermediate mechanism that connects the psychosocial work environment with outcomes. Burnout is a psychological syndrome that may emerge when employees are exposed to a stressful working environment, with high job demands and low resources (Bakker & Demerouti, 2007; Maslach et al., 2001). Evidence suggested that experience of burnout leads to several health-related issues such as respiratory and gastrointestinal infections (Kim et al., 2011), depression, sleep deprivation (Yang & Hayes, 2020).

Taking insight from literature and JD-R theory, it is expected that the effect of psychosocial work environment (demands and resources) on work wellness of employees is mediated by burnout. Work wellness refers to a composite of physical, emotional, spiritual, intellectual, psychological and social health (Reardon, 1998). It is the positive perception and expectation about physical health, self regard/self esteem, consolidative force between mind and body, intellectuality, and being valued in social life.
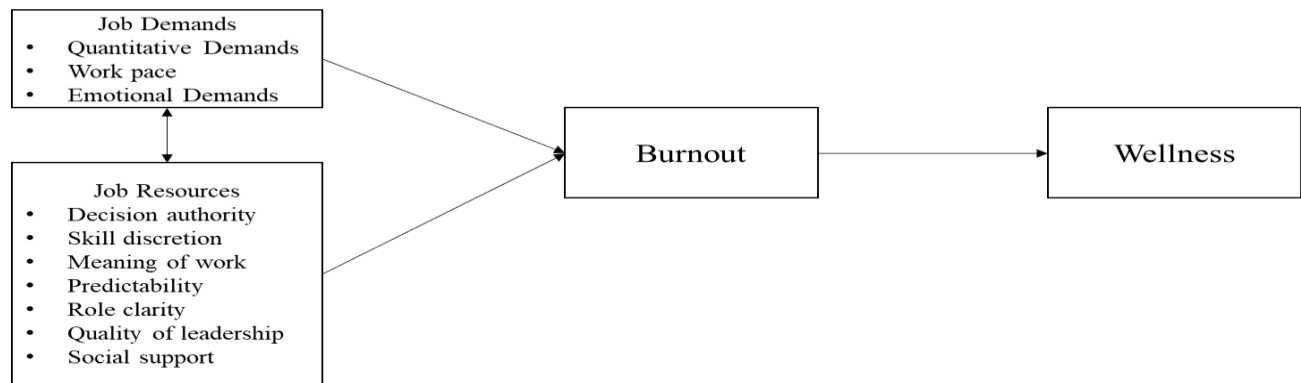
Figure 1: Hypothetical Model

The present study is planned taking insight from Job-Demands Resource Theory (Bakker & Demerouti, 2014; Bakker et al, 2023; Demerouti et al., 2001; Schaufeli & Bakker, 2004; Taris, & Schaufeli, 2015). The fundamental assumption of the JD-R theory is that different job characteristics can be categorized into two categories: job demands and job resources. The JD-R theory which mainly emerged as the model of employee wellbeing, proposes that job demands and resources can initiate health-impairment process and leads to burnout which may further contributes to wellness and well-being of employees. Following hypotheses were formulated in this regard

1. Job demands and job resources will differently associate with burnout and wellness of employees.
2. Burnout is likely to mediate the role of job demands and job resources in wellness of employees.

To test the health-impairment process, the sample of physicians were selected due to the following reasons. Physicians suffer from high stress and burnout (Fuß et al., 2008; Wallace et al., 2009), even more so than community samples (Carta et al., 2017). Physicians' burnout is important with a view to preventing and mitigating its purportedly high prevalence and impacts on individual physicians wellness. High job demands from physicians and low job resources provided to them can cause job strain, mental stress, and stress to employees, which result in physical and mental health problems. Employees who are burned-out by their work, experience more psychological and physical health problems (Bakker & Costa, 2014). The health impairment processes (burnout) evoked by job demands and resources may lead to wellness of employees (e.g., depressive symptoms; Upadyaya et al., 2016). A systematic review Yang and Hayes (2020) concluded that health care professionals suffering from burnout are at risk of developing a wide range of health-related problems. This effect of burnout on well-being was even higher during the pandemic COVID-19 (Conti et al., 2021)

2. Method

2.1 Sample

Sample consists of 251 physicians (M_{age} = 33.27 years; SD_{age} = 7.15) which were approached through purposive sampling technique. Only those physicians were recruited who work in emergency wards at least for 15 days a month. Demographic analysis indicated that 143 were female and remaining 108 were male. Among these physicians, 115 doctors have specialization after MBBS. More than half of the participants (51.4%) reported that they have a work experience of 2-5 years, remaining have a work experience of 5-10 years (31.1%) or 10 years and above (17.5%). In total, more than half (i.e., 56%) reported that they have no flexibility in their work schedule. Estimated daily work time of about half of the physician was 8-12 hours (42.2%) and about another half of the physicians was above 12 hours (47.2%). Only 36% reported that they often or always enjoy their work activities.

2.2. Measures

The *Copenhagen Psychosocial Questionnaire* (Kristensen et al., 2005) is a 44-item questionnaire measuring psychosocial environment. However, for this research 24-items measuring job demands and job resources were used. Six of the items measure job demands and 16 measure job resources. Job demands included quantitative demands, work pace, and emotional demands while job resources included decision authority, skill discretion, meaning of work, predictability, recognition, role clarity, quality of leadership, and social support. Participants report each item on a 5-point Likert scale (1 = *Never* – 5 = *Always*). Sample item is, "Do you have enough time for your work tasks." The internal consistency of job demands is (α = .60) and of job resource is (α = .82).

The *Oldenburg Burnout Inventory* (Demerouti, 1999) is a 16-items scale measuring burnout. Participants rate each item on a 4-point Likert scale (1 = *Strongly agree* – 4 = *Strongly disagree*). Sample item is, "There are days when I feel tired before I arrive at work." Internal consistency of burnout is (α = .62).

The *Perceived Wellness Scale* (Adams et al., 1997) is a 36-items scale measuring wellness. Participants rate each item on a 6-point Likert scale (1 = *Very strongly disagree* – 6 = *Vary strongly agree*). Sampe item is, "My physical health has restricted me in the past.". Internal consistency of wellness is (α = .81).

2.3 Procedure

After taking formal permission from the authorities, the data was collected from physicians of public sector hospitals. The participants were informed about the purpose of research. Consent was taken after guiding the research participants about confidentiality and anonymity of the data. They were also informed that they have right to withdraw from this research. The dataset consisted of 260 participants which through screening reduced to 251 physicians.

3. Results

Descriptive analysis was conducted to see the variability, and normality of the study variables. Moreover, reliability analysis was done to see the internal consistencies. Table 1 provides an overview of descriptive statistics, normality and reliability.

Table 1: Descriptive Statistics, Normality and Reliability of the Study Variables

Scales	α	M	SD	Skewness	Kurtosis
Job Demands	.60	2.09	0.72	-0.05	-0.54
Job Resources	.82	1.80	0.64	-0.33	-0.64
Burnout	.62	2.11	0.45	-0.72	-0.06
Wellness	.81	3.88	0.49	0.14	0.49

Table 1 shows that the study variables indicate variability in the responses. The data was normally distributed as all of the skewness kurtosis values were near to zero. Reliability analyses yielded good (α = .60 for job demands) to excellent (α = .82 for job resource) internal consistencies.

After conducting the preliminarily analysis, Pearson product moment correlation was performed. Table 2 provides an overview of this analysis.

Table 2: Pearson Product Moment Correlation between Study Variables

Scales	Gender	Work flexibility	Job Demands	Job Resources	Burnout	Wellness
Gender	-	-.17**	.01	-.17**	.07	-.09
Work flexibility		-	.03	.02	.00	-.13*
Job Demands			-	-.22***	.24***	-.16*
Job Resources				-	-.56***	.31***
Burnout					-	-.44***
Wellness						-

Note. Gender (1 =male, 2 = female). Work flexibility (1 = yes, 2 = No).

*** $p < .001$. ** $p < .01$. * $p < .05$.

Correlation analysis shows that among the two demographics, gender negatively associated with job resource while work flexibility negatively associated with wellness. Specifically female reported that they have job resources available more than male and those who have no flexibility at work reported low wellness. With respect to the study variables, job demands positively associated with burnout and negatively associated with wellness while job resources positively associated with wellness and negatively associated with burnout. Moreover, job demands and job resources negatively associated with one another.

Furthermore, model testing was done in AMOS to see the mediation of burnout between the association of job demands and job resources with wellness. Overall, model fit indices showed a good model fit as RMSEA = .02, base-line comparison ≥ .95, chi-square = 2.19 (2), $p > .05$. The model fit indices were in line with the recommendations of Hu and Bentler (1999) who suggested RMSEA value below or close to 0.06, baseline comparisons (i.e., CFI, TLI, and NFI) value of 0.95 or higher for a good model fit. Figure 2 provides an overview of the direct effects.
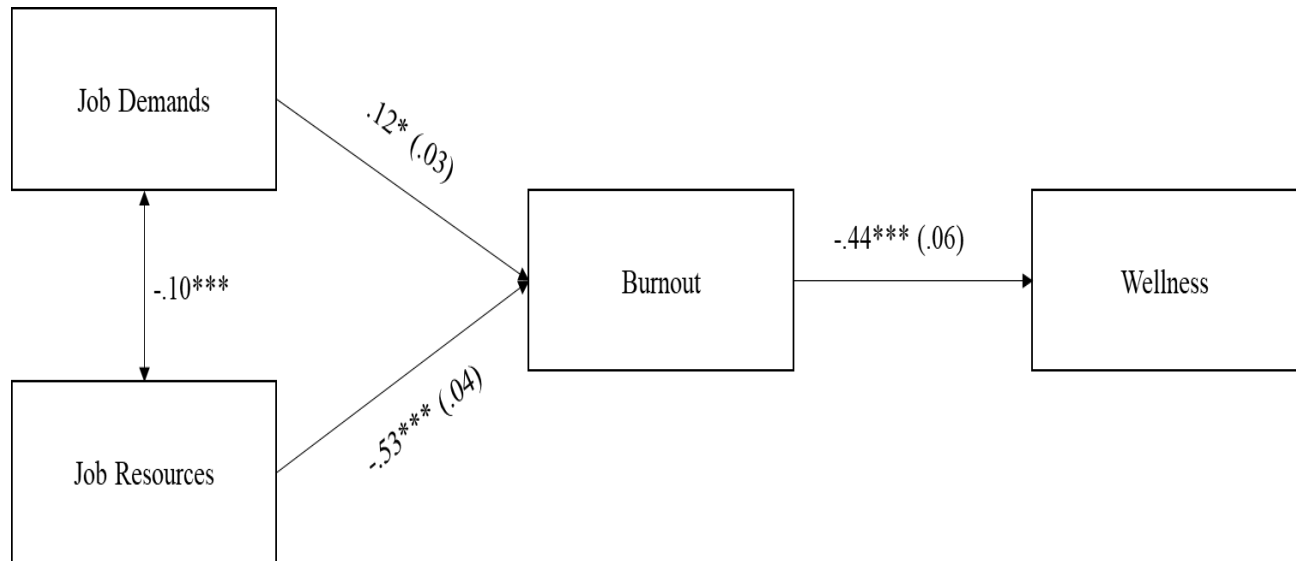
Figure 2: Statistical Model Presenting Standardized Direct Effects and Standard Error

Figure 2 shows a negative association between job characteristics namely job demands and job resources. All of the direct paths were statistically significant. The direct paths from job resources to burnout showed negative prediction and vice versa for job demands to burnout. Furthermore, burnout also emerged as negative predictor of wellness. Furthermore, indirect effects were explored using bootstrap sample of 2000 (See Table 3 for details).

Table 3: Standardized Indirect Effects OF Job Characteristics on Wellness using 2000Bootstapp Sample

Indirect Paths	β	SE	95% CI	
			LL	UL
Job demands → Burnout → Wellness	-.04	.03	-.07	-.01
Job Resource → Burnout → Wellness	.18	.02	.13	.24

Table shows that bootstrap analysis using 2000 sample indicate the mediating role of burnout in the relation of job demands and job resources with wellness. The direction for the mediating mechanism was negative for job demands and positive for job resources.

4. Discussion

This study examined the role of psychosocial work environment for work wellness. The main interest was to examine the health-impairment process of the JD-R theory (Schaufeli & Bakker, 2004) as a mechanism through which job demands and job resources contributes in work wellness through the mediating mechanism of burnout. For the fine-grained test of health-impairment process, the data was collected from physicians considering the prominent role of burnout in a wide range of health-related problems (e.g., depressive disorders and insomnia) among health care professionals (Yang & Hayes, 2020). Most of the results corroborated in the expected direction as consistent with previous literature health-impairment process of JD-R theory. In sum, it is concluded that psychosocial environment at work matter for the well-being of employees.

In line with the first assumption of the study, the findings provide evidence that job demands and job resources will differently associate with burnout and wellness of employees. For instance, job demands positively associated with burnout while negatively associated with the wellness of physicians. The reverse has been for the association of job resources with burnout and wellness. These findings are consistent with the defining aspects of demands and resources. Demands being required effort or skill set are associated with certain physiological or psychological cost while resources being functional aspects of work achievement may stimulate personal growth and development (Bakker & Demerouti, 2007; Demerouti et al., 2001).

The present findings also supported the second assumption of this study (i.e., mediating role of burnout between psychosocial work environment and wellness). Physicians with high-level job demands tended to exhibit increased burnout, which in turn threatened their wellness. Doctors may compensate increasing job demands by exerting more physical or psychological effort to maintain their wellness. Continuous mobilization of compensatory efforts drains doctors' energy, leading to increasing burnout and ill health (Ryan & Deci, 2000). Literature suggested that job demands may hinder the well-being of employees (e.g., de Vries et al., 2018; Wynen et al., 2020). On the contrary, doctors with greater job resources were more likely to experience increased wellness by lower level of burnout. Doctors with plenty of additional work-related resources will exhibit greater comfort and psychological security in the workplace (Scheepers et al., 2017).

4.1. Implications

- The study provided empirical support to the health-impairment process of Job-Demands Resource theory by testing it among Pakistani physicians.

- The findings implicates that occupational health professionals/organizations should play a central role in the prevention and reduction of burnout, simultaneously paying attention to the organizational context and the personal needs of the individual employee (Kompier et al., 2000).

- The current study suggested that health policymakers and hospital administrators should provide a work environment with a dynamic equilibrium between doctors' job demands and resources.

- Medical organizations can utilize Job redesign intervention to rearrange task and responsibility with job role in order to balance job demand and job resources for employees.

- Interventions can be developed to reduce negative impact of burnout among employees in general and among physicians in specific.

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Political Economy of Regional Integration: A Case of China-Pakistan Economic Corridor (CPEC)

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Abstract

The states are the collective political and economic manifestations of human behavior. Therefore, states act in similar manners as humans for their survival, security, growth, and development. History shows that states form groups, alliances, blocs, regimes, and integrations for their sustainable development. Sometimes, states compete with one another through military powers for their security and survival. Subsequently, military power and strength has been supplanted with economic security in the modern world. It has given birth to the regional integrations and connectivity for mutual growth and development of the regions, and it has also helped in the competition of one region against the other for establishing their power and strength. Each regional integration has political as well economic motives. In the same way, China-Pakistan Economic Corridor (CPEC) has its own political economy being part of Belt and Road Initiative (BRI) which is latest example of regional integration in the recent times. CPEC has not only political and economic benefits for Pakistan, but it also provides ample opportunities to the country for regional connectivity and integration for sustainable economic growth and development. Therefore, it is significant to explore the implications of CPEC in terms of political, and economic which has been dealt in this research study through a qualitative research methodology. This study has revealed that CPEC has great political and economic insinuations for Pakistan, and it can help in the sustainable growth and development of the country if its diverse range of projects are governed effectively.

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1. Introduction

Humans have been political since their existence in this world. They have also been involved in economic activities for their survival individually as well as collectively since primitive societies. The advancement and development over the period of time have made the political and economic relations complex within the humans as well as among the states as the collective entity of the humans. The states have adopted numerous tools, frameworks, and mechanisms according to the needs and requirements of the time for their security, safety, growth, development, and stability. Regional integration is also among those mechanisms which have been adopted by the states over the period of time. This mechanism has been adopted for mutual development and economic growth of the regions and states which are involved in this arrangement for the welfare of the people residing in those regions. History has witnessed different arrangements of regional integration over the period of time especially in post-World War-II and post-cold war era for fulfilling the needs of the people and states at large. Every example of regional integration shows that it has its own political economy and implications for the member states and regions as well as for the world. The recent times example of regional integration is Belt and Road Initiative (BRI) unveiled by China as its vision of harmonious, peaceful, and mutually developed world. This initiative offers global economic integration along with the connectivity of regions through road and maritime routes for their economic growth and development. China claims this complex interdependence as a win-win situation for all those actors which will be part of this arrangement in this new world order. Pakistan is also one of the significant actors of this regional integration through China-Pakistan Economic Corridor (CPEC). It has its own political economy like any other regional integration; thus, it is required to study and investigate the political and economic dynamics of China-Pakistan Economic Corridor as a regional integration arrangement and also as a part of BRI which is a global economic integration vision for this new world.

1.1 Statement of the Problem

David Mitrany, a famous British historian and political theorist and a creator of the functional theory of Regional Integration, considers regional integration as an essential apparatus for solving the problems of this advanced and complex world due to the technological, political, social, and economic developments over the period of time. Regional integrations allow the countries to pool their economic resources for coping with their problems collectively and effectively. It not only enhances their economic strength against the other regions across the globe but also establishes their political depth and power in the in the world. Regional integrations with economic as well as political motives have been witnessed since 1950s but recent example of regional integration is Belt and Road Initiative (BRI) by Peoples Republic of China. China-Pakistan Economic Corridor (CPEC) is a flagship project of this initiative which has initiated first among all other six corridors of BRI. The geostrategic position of Pakistan has amplified the significance of this project in the region. It has economic as well as political

implications for Pakistan as a regional player of South Asia which need to be investigated for assessing the actual importance of CPEC for Pakistan.

1.2   Research Questions

- What is the political economy of regional integration theoretically?
- What are the geopolitical and geo-economic implications of CPEC for Pakistan?

1.3   Research Methodology

This research study is qualitative in nature. It has relied on secondary sources of data collection like books, research journals and reports published on the said issue. The secondary sources have been analyzed through content analysis which has helped to explore the research problem in detail and has also aided to reach out to the conclusion of the study.

1.4   Significance

Regional integration and connectivity promote economic growth and development of the connected regions. It encourages regionalism which is a significant phenomenon in the global economic system. Different regions are integrating and connecting in this new world and sharing mutual benefits in terms of social, political and economics. BRI launched by China is a recent example of regional integration and connectivity in this new world which is also promoting regionalism in the East. CPEC is one of these six corridors, and it has started in Pakistan with its multi-sectoral projects. It has brought huge investment in different sectors of Pakistan, and it has numerous economic benefits but at the same time it has also political and social implications. Therefore, it is required to study and explore CPEC with reference to geo-economic and geopolitical dimensions for investigating the benefits of this multi-sectoral project not only in economic terms but also in the context of political sways in Pakistan.

2.   Theoretical Foundation of Political Economy of Regional Integration

Survival and safety are two basic instincts and impulses of humans. Like humans, communities, groups, and states also possess these two fundamental goals of survival and safety. There are different mechanisms adopted by humans at individual level as well as at community and states level for ensuring their survival and safety. The states which emerged as nation states in 1648 after Peace of Westphalia had joined groups, form alliances or blocs for their protection, safety, and peaceful survival. Different scholars have explained human nature in diverse forms which have developed conflicting school of thoughts academically over the period of time. These differing schools of thought provide foundations for adoption of diverse systems and frameworks for humans at individual levels and nation states at collective level for their survival and safety. Machiavelli, Thomas Hobbes, and Jean-Jacques Rousseau consider humans brutish and selfish due to which conflict is inevitable (Burchill, 2001). The use of force and power is the only solution for humans and states for their protection and survival. This thought

has paved the way for the development of Realism and Neo-Realism as a paradigm in which different other scholars have contributed over the period of time. According to Realists and Neo-Realists scholars, war is unavoidable between the states due to the selfish and brutish nature of humans, and the same behavior is manifested by the states as a collective entity of humans. Therefore, nation states develop their military strength and hard power for their protection and survival due to which we have witnessed world wars and other devastating conflicts in different eras, and these have resulted into severe damage and destruction across the globe. On the other hand, there is another school of thought that believes in the compassion and kindness of humans. Immanuel Kant is a main proponent of peaceful human nature and believes that humans could maintain permanent peace and there is harmony and cooperation among the humans, thus, peace can prevail in the whole society and state as collective unit of humans (Burchill, 2001). John Locke also believes in the goodness of humans and favors the principles of private property, government by the consent of humans and individual freedom. These thoughts have given birth to Liberalism as an alternative school of Realism and Neo-Realism in the era of uncertainty and insecurity due to religious and civil war in 17th century (Jahn, 2013). There are different prominent scholars of Liberalism like Cobden Schumpeter and Michael Doyle who also trust in humanity and empathy like Kant and Locke. Liberalism has emerged as a protestant ideology, and it believes on the economic liberty of citizens. On the other hand, Adam Smith also favors free trade and free market among the citizens of the state without any intervention (Burchill, 2001). Free trade among individuals or corporations facilitates cooperation and collaboration at an international level. Liberalism has three shades, and these include *ideational*, *commercial,* and *political*. Beate Jahn (2013) considers *ideational* as *cultural* aspects of liberalism and democracy is the core value of liberalism according to her because it establishes a culture of human freedom and liberty. However, *commercial* shade is an *economic* aspect of liberalism as per Jahn's theory (Jahn, 2013). Economic liberalism advocates free market, free trade, and regimes at international level. Joseph Nye and Robert Keohane are neoliberalists and they have worked a lot on liberal internationalism. According to them, national security in terms of traditional security is a result of cold war whereas time has changed and now it is the era of *mutual interdependence* and they have given the concept of complex interdependence which is a mutually benefit arrangement for all involved states for their security and survival (Keohane & Nye, 2013). The idea of *complex interdependence* has revolutionized the concept of security, and it has changed its manifestation from traditional to *economic* terms. It has promoted the mechanisms of *regional integrations* for economic as well as political benefits. Regional integration is not a recent phenomenon as we have also witnessed it in the 1950s after World War II. The world has moved towards integrated trade, foreign direct investment, and finances for mutual economic development for dealing with the destruction caused by war collectively. It has developed different economic and political institutions in different regions of the world for the collective welfare of the people as well as of the regions. The European Union is a significant example of the regional integration of the 1950s. This European community was developed on the basis of the Treaty of Rome 1957, and it is considered as a deep

integration because it has both political and economic motives for the benefits of whole Europe (Gilpin & Gilpin, 2001). This integration has helped in the growth and development of Europe economically as well as politically through democracy as a core liberal value. This successful regional integration has triggered other arrangements in different parts of the world. Like Multilateral trade liberalization within the General Agreement on Tariffs and Trade (GATT) by USA in 1960s, Single Market Act 1986 for closed West European market, North American Free Trade Agreement (NAFTA) between USA, Canada, and Mexico in 1994 and then Pacific Asia by the efforts of Japan for regional economic integration (Gilpin & Gilpin, 2001). These regional integrations are *policy* driven or *market* driven but all have common basic motives, and these motives are security, technological advancement, international competition, pooling of resources for mutual development and growth, economies of scale, solution of disputes and conflicts and counterbalance of regions in different parts of the world. Theoretically, the scholars have used different political (Federalism, Neofunctionalism, Neoinstitutionalism, Intergovernmentalism, Realism) and economic (Neoinstitutionalism, New Political Economy, Theory of Optimum Currency Area, Optimum Regionalization, Theory of Comparative Advantage) theories separately for explaining these regional integrations formed in different parts of the world in different eras for explaining the basic objectives and goals of these arrangement but there is not a single theory available which can explain this arrangement politically and economically together. On the other hand, practically, these integrations have multidimensional causes, objectives, and consequences for the nation states which are part of these arrangements. However, liberalism is the core philosophy behind all the regional integrations available in the form of different blocs, alliances, and institutions in the various parts of the world. These integrations promote interdependence and mutual growth and development which is a win-win situation for all the member states of these alliances which is a basis of liberalism.

3. **Discussion**

Regional integrations have emerged as the results of wars for mutual development and benefits. The prominent regional integrations have been witnessed in the era of post-World War II and post-cold war. Nye and Keohane's work on interdependence and particularly on complex interdependence in 1977 has amplified regional integrations in the post-cold war period. Robert Keohane has also given theory of Neoinstitutionalism as a political theory of Regional Integration in which he has emphasized on the formation of international institutions in the form of regimes to assist the states for solution of common problems and for promotion of cooperation within the states (Keohane & Nye, 2013). According to him, it helps to mitigate conflicts and avoid wars and promote peace, harmony, and mutual development of the member states. The European Union is a clear example of this type of international institution which has helped European countries to grow and develop mutually.

3.1 **Regional Integration in Post-Cold War Era**

The post-cold war era is a transitional period for the world especially from the economics perspective as per Stephen Holmes (Gilpin & Gilpin, 2001). He states that there was a transition from communism towards a democratic-capitalism in the world after the disintegration of Union of Soviet Socialist Republic (USSR) (Gilpin & Gilpin, 2001). China and Russia are significant examples of this transition. Although, these are not converted into complete liberal states but still these states have adopted some features of economic and political liberalism as China has developed the model of state led capitalism which has accelerated the economic growth and development of China exponentially. Globalization, democratic values, and liberal economies are the prominent and dominant notions of post-cold war era came from the west due to the uni-polar world (Thirkell, 2006). The disintegration of USSR at the end of 1980s has changed the international dynamics. The emphasis of great powers on security has declined and it has replaced with the economic dimension in the international scenario (Cohen, 2008). Power is not associated to the territory under possession and military strength, but it is linked with technological advancement, economic development, trade, science, innovation, and entrepreneurial skills in the post-cold war world (Francis, 2017). The economic competition has started between the nation states in this period, and it has led towards regional blocs, alliances, integrations, and trade regimes for developing the economic strength of the nation states through these arrangements. Europe has deepened its integration arrangement by announcing a single market and single currency for unification of the region. In 1993, the European Council extended its membership to a few more countries of Europe on the basis of clear criteria of stable democracy, human rights protection, protection of minorities and functioning market economy. The countries which fulfill these mentioned criteria are included in the European Union in different years like 1998, 2004 and 2007 (Dabène, 2009). NAFTA (1994) is the prominent regional integration of North America, but Kevin G. Cai believes that influence of United States alone on world economy has fallen in post-cold war era and it has been dominated by the joint system of United Sates, Europe, Japan, and rising China (Cai, 2010). Globalization has benefited Japan, Russia, China, and oil-based economies and these have accumulated large reserves which is resulted in the rapid economic growth of these economies. The globalized economic world has produced institutions like World Trade Organization (WTO) which has enhanced the economic interdependence of multiple economies on one another, but it has also made complex economic interdependence in the words of Nye and Keohane. On the other hand, globalized economic world has undermined the states' autonomy and authority due to which there is a tension between the international global institutions and states for establishing rules and regulations for free trade and free market economy with global governance. Therefore, regionalization and regional integrations has provided the mid-way to both nation states and global institutions for economic development in the post-cold war era according to Joseph Nye. There are 250 regional trade agreements have been notified by WTO till 2006 and it shows that no country of the world is virtually out of regional agreements, and it also establishes the approval and acceptance of regional alliances across the globe at wide scale (Tavares, 2008).

3.2 Regional Integration and South Asia

South Asia comprising of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, and home to around one-fourth of the world's population is a unique place which is least integrated and more prone to conflict. Although, there are many similarities among the member states of South Asia like history of colonialism, cultural patterns and geographical uniqueness but still there are differences and conflicts among the member states (Tavares, 2008). There are political and religious fault lines which have made this region prone to conflict. Some efforts have been made in the past for regional integration for the mutual economic benefits and development of this region, but the results are not really satisfactory. There are different arrangements of regional integration and cooperation of South Asia, and these are South Asian Association for Regional Cooperation (SAARC) formed in 1988 provides multiple forums for different issues and agendas for mutual cooperation and benefit of member states, Indian Ocean Rim Association for Regional Cooperation (IOR-ARC) formed in 1997 based on 18 member states for facilitation of trade and investment in the region and Bay of Bengal Initiative for Multisectoral Technical and Economic Cooperation (BIMSTEC) formed in 1997. The member states of these alliances have been provided different forums for resolving the issues and conflicts and for the mutual economic benefits and cooperation but still there is a huge room for development available in this region. India is a dominating member of all the mentioned alliances of regional integration whereas Pakistan is a member of SAARC only. Pakistan and India's rivalry is one of the major impediments in the regional development and integration.

China as a rising power and significant player of the region has unveiled its vison of economic integration recently in 2013. It is known as Belt and Road Initiative (BRI) which was previously known as One Belt One Road (OBOR). BRI provides global as well as regional integration. It is a combination of network of *road* (starting in western China that goes through Central Asia and on to the Middle East and ending in the European Union) (Arduino & Xue, 2018) and *maritime* (connects Southeast Asia, the Persian Gulf and the Horn of Africa and ending in the EU) (Green et al., 2018). There are different objectives of BRI, and these are policy coordination, connectivity, financial integration, people to people bonding and unhindered trade between the member states of this integration (Mobley, 2019). These objectives show the vision and broad scope of BRI. There are six different corridors of BRI. These corridors include Eurasian Land Bridges, China-Mongolia-Russia, China-Central and West Asia, China-Indochina Peninsula, Bangladesh-China-India-Myanmar, and China-Pakistan Economic Corridor (Shafqat, 2017). Pakistan is very significant for China geographically for its BRI due to which China-Pakistan Economic Corridor (CPEC) is the first project among all six corridors started by China in this regard.

3.3   China-Pakistan Economic Corridor (CPEC)

China-Pakistan Economic Corridor (CPEC) is a flagship project of BRI; therefore, it is vital for both Pakistan and China. CPEC is a mega project which connects North-Western Xinjiang city of China to Gwadar of Pakistan via road, rail and pipeline network (Afridi & Khalid, 2016). It is a long route which connects different regions of China with different areas of Pakistan. Furthermore, it connects China to South Asia, land locked Central Asia, Middle East, and East Asia with shortest covered distance. The strategic geographical position of Pakistan also makes CPEC significant for China because it lies at the passage which joins the road network of BRI with its maritime route (Rehman et al., 2017) and it also provided shortest route to China to access the other parts of the world through Gwadar port. Thus, it is not only significant for Pakistan, but it is also vital for the connectivity and integration of China with the rest of the world. It also paves way for the region and particularly South Asia for connectivity, integration, and economic development though economic interdependence. CPEC has brought multibillion dollar investment in different sectors of Pakistan. It has diverse range of projects which has estimated construction cost of almost $46 billion and all these projects will be completed in several years (Board of Investment[BOI], n.d.). These sectors include infrastructural development in terms of roads and railways, energy (production and energy infrastructural development), telecommunication, agriculture, and development of special economic zones for the generation of economic activities in the country through industrial growth and development (Khan & Khan, 2019).

Table 1: Sector Wise Projects and Estimated Cost

Sr. No.	Sector	No. of Projects	Estimated Cost ($Million)
1.	Energy	21	33,793
2.	Transport Infrastructure	4	9,784
3.	Gwadar	8	792.62

Source: *Board of Investment, Government of Pakistan.*

Table 1 shows the sector wise projects in number along with the estimates cost of projects in each sector. The energy sector projects cover all different type of energies including wind, hydel, coal, solar and LNG along with the projects of transmission of energy which is a grave issue of the energy sector of Pakistan. The line losses and transmission inefficiencies have caused major shortfall of energy in Pakistan which have serious repercussions for the economic development of the country. The transmission projects under the umbrella of CPEC will help Pakistan to deal with this issue effectively. The transport infrastructure projects cover road, railway, and aviation routes. On the other hand, Gwadar projects not only include the development of Gwadar port but also cover

city's socio-economic development. It shows the comprehensive long term development plan for the economy of Pakistan.

Pakistan and China have long history of diplomatic, military and trade relations and both countries are dependable partners for each other in difficult times but CPEC as a part of grand design of China (Stanzel et al., 2017) revealed in the form of BRI has started new era of politics of interdependence. It is a complex interdependence for both Pakistan and China in the words of Nye and Keohane in coming future. Furthermore, CPEC is also a manifestation of economic integration and regional connectivity, and it has made Pakistan a significant player of the region because of its geography in the map of South Asia. It provides significant opportunity to not only China but also to Pakistan for connecting the rest of the world for mutual economic growth and development. It also provides a platform for other countries of South Asia to become part of this connectivity for their own development which resultantly will lead towards regional growth and development. CPEC is vital for China for materializing its vision of global connectivity through BRI, but it is also very crucial for Pakistan for its sustainable economic growth and development. The design, configuration, and formation of CPEC highlights not only the economic implications for the country but also displays its political subtleties for Pakistan as well as for the region due to the geography and location of the country in the region.

3.4   Geopolitical Dynamics of CPEC

CPEC has substantial political implications for Pakistan in the long run. The geo-economic dynamics of CPEC will strengthen the geopolitical position of the country internally as well as externally. Pakistan is a politically instable country due to ethnic and religious politics since the start of the country. This politics has been aggravated over the period of time due to the lack of opportunities, deprivation, and marginalization of different ethnicities of the country. The economic underdevelopment and low resources have played an imperative role in this political conundrum of the country. Balochistan, Khyber Pakhtunkhwa (KPK), Southern Punjab and interior Sindh are deprived regions of the country, and it is major and constant source of political instability of the country which contributes adversely to the overall security of the country. CPEC has brought huge investment through the diverse range of projects initiated in these underdeveloped and underprivileged areas. The different road and railway routes connect different rural areas of Pakistan with urban centers and underdeveloped areas with developed centers of the country through diverse nodes which will help to address the grievances of underprivileged classes and will contribute to the overall political stability of the country. Gwadar port development is a huge project which will help in the economic development of Balochistan at large which is least developed area of Pakistan. Likewise, other projects of energy, minerals, roads, and railways in various parts of the country will help to tackle the ethnic politics of Pakistan effectively by provision of opportunities to less developed areas, inclusion of different stakeholders in the development and growth and by minimizing the deprivation of the people of the country. Inclusive growth and

development will help to address the political issues of the country effectively and will strengthen the political system of the country. On the external fronts, the economic dynamics of CPEC will consolidate the political position and power of Pakistan as a regional player. Pakistan will be a platform for different countries of the region for economic connectivity and integration due to which it will increase the stakes of different countries in Pakistan. Henceforth, it will elevate the political position and status of the country in the region. Furthermore, it will fortify, strengthen, and secure the position of Pakistan against its rival India. Regional interdependence and connectivity will help to deal with conflict and disputes effectively. It will pave way to solve the regional conflicts politically due to having the stakes of different actors because of the economic integration and connectivity in the region. Moreover, it will help maintaining stability and peace not only in Pakistan but also in South Asia as well as in this whole region.

3.5   Geo-economic Dynamics of CPEC

The apparent organization and composition of CPEC supports its geo-economic dynamics more because it is based on the framework of economic integration and complex interdependence. It has huge economic benefits for the struggling economy of Pakistan. The multibillion-dollar investment in diverse range of sectors of Pakistan will support to generate not only economic activity in the country but will also create large scale opportunities of employment and human resource development which will lead towards economic growth, development, and stability. The huge job opportunities in the country will help to engage the youth of Pakistan which is large bulge of the population. It will convert the raw human resources into skilled resources which is essential and vital for any economic growth and development. The projects of CPEC in different sectors have been operationalizing on the mode of Public-Private Partnership (PPP) and this modality will help to attract Foreign Direct Investment (FDI) not only from China but also from other consortiums and companies of different countries which will form partnerships for different sector projects of CPEC. Consequently, it will attract FDI across the globe in Pakistan which will play imperative role in the sustainable economic development of the country. The energy sector projects of diverse range including production and transmission will make the country self-sufficient for dealing with the energy crisis of Pakistan. It will help in the industrial growth and development of the country. Telecommunication is imperative in this era of the cyber world. Pakistan has immense potential for e-commerce and ICT based services, but it requires well-designed and advanced infrastructure of telecommunication. The telecom sector projects under CPEC will strengthen the telecom sector of Pakistan which will help to contribute to the overall economic development of the country. Special Economic Zones (SEZs) are significant parts of economic corridors. These zones provide all facilities to industries at one place which facilitates the industrial growth of the country which is a backbone of economic development. Eight special economic zones will be developed in Pakistan under the umbrella of CPEC. Rashakai, Dhabeji and Bostan Special Economic Zones and Allama Iqbal Industrial City are under construction projects in this regard whereas ICT Model Industrial Zone, Industrial Park on Pakistan Steel Mill Land, Mirpur Industrial

Zone, Mohmand Marble City and Moqpondass Special Economic Zone are in-pipeline projects. The completion of all these economic zones will be huge support for the economy of Pakistan which is unbelievably bad. CPEC has huge economic benefits for Pakistan for its growth, development, and economic stability. Pakistan can reap its maximum fruits through effective planning, timely decision making, institutional strength, transparency, and effective monitoring for timely completion and management of projects.

4. Conclusion

Regional integration and connectivity for economic interdependence is the new paradigm of power, security, and strength in this new era of 21st century. The power dynamics have changed in this new world due to which regional economic integrations are the name of the game in this era. It is not a new phenomenon as it has been since the 1950s after World War-II for dealing with the destruction and devastation of the world caused by the war. Later, it became in vogue in the 1980s after the idea of complex interdependence of Nye and Keohane. According to Chohan (2018), the center of economic gravity has shifted to east now, thus, we are witnessing the largest example of regional integration announced by China in 2013 in the form of BRI (Golley & Ingle, 2017). It is establishing global as well regional integration through its six different economic corridors connected through road, railway, and maritime routes. Seaports are important parts of this regional integration and connectivity as seaports are gateway to the world economy according to Sun Degang (2018). CPEC is one of its flagship corridors of this largest regional integration of this modern world. China has initiated this corridor of CPEC first among all other corridors and this corridor presents best example of political economy of regional integration of recent times. It has enhanced the geostrategic position of Pakistan in the region especially in South Asia. CPEC has not only geo-economic benefits for the struggling economy of Pakistan, but it has also geopolitical implications for the country internally as well externally eventually. Pakistan has large-scale long-term benefits of CPEC, and it can maximize its social, political, and economic benefits through the institutional strength, effective project management and governance, political will, and visionary leadership.

4.1   Future Research

BRI and CPEC are evolving and growing realities, therefore, both as regional integration tools have many unexplored areas with reference to the political economy. There are different corridors which will connect multiple land and maritime routes globally and will involve diverse countries of the entire world. Thus, geopolitical and economic dimension of BRI with reference to different countries and corridors can be explored and investigated in future. Furthermore, the identified geo-economic and geopolitical implications of CPEC for Pakistan in this research study can be verified in future after completion of the divergent phases of CPEC.

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Great Power Rivalry in Indian Ocean: Implications and Options for Pakistan

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Abstract

The Indian Ocean region holds immense significance due to its vital maritime trade routes and abundant natural resources. With intensifying China – U.S. competition for power in Indo-Pacific region, the geopolitical landscape in Indian Ocean is getting increasingly volatile. This research article delves into the geopolitical and strategic significance of the Indian Ocean and its evolving dynamics, primarily focusing on the perspectives of major global players: the USA, China, and India, and its impact on Pakistan. The study explores major developments currently taking place in Indian Ocean including China's Belt and Road Initiative (BRI), the China-Pakistan Economic Corridor (CPEC), Quad alliance, AUKUS agreement, Indo-U.S. strategic cooperation, India's assertive naval buildup, and emergence of new form of asymmetric threats in maritime domain. In the backdrop of neorealist "balance of power theory", the research elaborates how the hegemonic power competition is upsetting the balance of power, intensifying security dilemma, and igniting arms race in Indian Ocean region. These developments potentially undermine strategic stability in Indian Ocean which could eventually lead to conflicts. The research specifically examines the economic, political, and strategic implications of intensifying power rivalry in Indian Ocean on Pakistan. In addition the study also proposes feasible options for Pakistan to counter the destabilizing consequences of power politics in Indian Ocean.

Key Words: **Belt and Road Initiative (BRI), China Pakistan Economic Corridor (CPEC), Quad, AUKUS, Strategic Stability, Balance of Power, Security Dilemma, Arms Race**

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1. Introduction

In contemporary world, Indian Ocean has gradually become staging ground for the geopolitical competition and strategic maneuvering among major global powers, like United States and China, and regional powers. The U.S. has traditionally maintained a strong naval presence in the Indian Ocean, asserting its influence and ensuring the security of sea lanes critical for global trade. In contrast, China has been expanding its naval capabilities and infrastructure, aiming to secure its economic interests, particularly through the Belt and Road Initiative (BRI). India, with its political ambitions of being regional hegemon (regional policeman), is pushing to become a net-security provider in Indian Ocean. In this push, India is fiercely backed by the United States as both see a common enemy in China. Both the United States as well as India are using all available means to deny access to China in the region of Indian Ocean. The evolving geopolitical dynamics in the Indian Ocean reflect a complex power struggle involving economic, nuclear, military, technological and political dimensions. As these power dynamics unfold, understanding and managing the geopolitical tensions in the Indian Ocean become crucial for the stability and balance of power in the broader international system.

2. Theoretical Framework

Balance of Power (BoP) is one of the key subset of Realist school of thought and has been defined in various ways. Classical or traditional realist scholars such as Hans J. Morgenthau defines it as actual state of affairs signifying the distribution of power among various states having approximate power and capabilities. Other historians define balance of power as power equilibrium among states that inhibits one state from becoming colossally powerful to dictate its will upon other states. As per Palmer and Perkins, BoP underlies countervailing pressures and shifting alliances impeding the growth of either one power or combination of power from becoming strong to an extent that will disrupt security of other states.

Morgenthau while taking a traditional realist perspective and its emphasis on human being dictating the drive for domination and power argues that balance of power can mitigate this behavior and will subsequently ensure order and stability of international system. According to him, the balance of power and its resultant policies aimed at establishment and maintenance of order are deemed quintessential for international political stability. However, his core argument is that balance of power is consequent of struggle for power in which states primarily intend to acquire superiority rather than explicit establishment of balance of power.

On other hand Neo-realists such as Kenneth Waltz has developed balance of power as a refined theoretical approach in a scientific and consistent manner. As per him, international political structure causes states to fend for themselves given the prevalence of anarchy in the system. Resultantly, small states engage in act of balancing against more

powerful threatening actor. This implies that balance of power as per Waltz focuses on anarchical international system which in turn characterize self-help puts limits on the states' behavior (Anderson, 2018).

As per neorealism, there are two key ways of balancing: Internal balancing and external balancing. The former implies channelization of resources of states for increasing armaments, resource extraction, prevention of infiltration and revolts, and adequate organization of state in order to strengthen and guard oneself for competing in an effective manner. As far as external balancing goes, it underscores formulation of alliances with the purpose to stop a rising power. Waltz argues, despite the difficulty with respect to state's collaboration, the emergence of existential or common threat led states to put aside their confliction and band together against a threatening-cum-dominating state (Anderson, 2016).

With respect to Indian Ocean Region, balance of power rightly explains the current interplay of geopolitics between states and convergence as well as divergence of states interests. According to BoP, key regional littorals (India, Pakistan) and extra-regional powers (U.S., China, Japan, Australia) have forged coalitions and alliances in order to address security, military and economic concerns emanating from the volatile and ever-changing strategic environment in Indian Ocean. The balancing is evident from the U.S.-led Quad wherein U.S., India, Japan, and Australia have shown a strong commitment for rule-based Free and Open Indo-Pacific (FOIP) region characterized by democratic values, resolution of military disputes, freedom of navigation and over flight, political integrity, and most importantly rule of law. AUKUS is another manifestation of such alliance formation which although is directed broadly at Indo-Pacific; nonetheless has ramifications for Indian Ocean given the key objective of both Quad and AUKUS as Balancing of Power against the China. The receding influence of U.S. as sole global arbiter alongside the ever-enhancing military and economic might of China manifested through mega Belt and Road Initiative-BRI implies the significance of balancing China through forging allies and forming coalitions (Mohan, 2022). Not only that, to offset China's unhindered economic growth and ever increasing footprint in Indian Ocean, the United States and India have inked various agreements to facilitate ease of operations by their militaries especially navies; improve interoperability between both navies and to provide geospatial intelligence. Bilateral agreements like LEMOA, COMCASA, BECA are strategic in essence and aim to expand Balance of Power in favour of U.S and India against China.

3.   Significance of Indian Ocean

Covering over 68,536,000 sq-km, the Indian Ocean constitutes approximately 27 percent of the Earth's water surface. It's surrounded by Asia, Africa, Australia, and Antarctic Ocean, and connects Pacific Ocean to the Mediterranean Sea. The trade routes transiting through Indian Ocean are vital for commercial shipping and carry significant political and strategic importance. Chokepoints such as the Strait of Hormuz, Bab-el-

Mandeb, Horn of Africa, Suez Canal, and Malacca Strait serve as crucial transit nodes for global trade. Each year, around 80 percent of the world oil and a staggering 9.84 billion tons of cargo is traded through the international se alanes of the Indian Ocean. Littoral states along the Indian Ocean account for 65 percent of the world's oil reserves, and 35 percent of the world's gas resources. In 2020, the total trade reported by the Indian Ocean rim amounted to $6.17 trillion. Any disruption along these strategically significant routes can have profound implications for the world's energy and economic security (Baruah, 2021).

For the United States, the Indian Ocean is of paramount importance within its Indo-Pacific strategic framework. The network of crucial shipping lanes in Indian Ocean holds pivotal importance for U.S, its strategic interests in the region as well as beyond. The region's energy security and safety and security of sea lanes is a key concern, given the significant portion of the world's oil and gas passing through the chokepoints of Indian Ocean. The U.S. maintains a robust naval presence in Indian Ocean. The U.S. Navy's Fifth Fleet, headquartered in Bahrain alongside the U.S. Naval Forces Central Command, maintains active presence in Indian Ocean. Additionally, the United States military base at Diego Garcia provides it strategic pivot for power projection in entire region. Additionally, US-Navy plays important role in thwarting non-traditional security challenges in Indian Ocean. (Nilanthi, 2023).

China views the Indian Ocean as a key component of its global interests. Almost 80 percent of China's imported crude oil transit through the Strait of Malacca. The Belt and Road Initiative (BRI), a cornerstone of China's foreign policy, emphasizes infrastructure development and connectivity with the Indian Ocean. In terms of trade relationships, China stands as the leading import partner for twenty-four countries in the Indian Ocean and the primary export partner for thirteen nations. China has gradually expanded its naval presence to safeguard its sea borne trade. People's Liberation Army Navy (PLAN) has established first ever overseas base in Djibouti in proximity of strategically important Bab-ul-Mandab strait. A newly constructed pier (berth) is large enough to accommodate aircraft carrier. It is hence obvious that China intends to station and operate its new modern aircraft carriers in the Indian Ocean from here in future. An aircraft carrier is a formidable instrument of power projection and sustained operations in blue water. China's increasing naval presence in the region reflects its growing interest in securing sea lanes, protecting overseas interests besides nationals (diaspora) abroad. This fits well with Beijing's expanding economic footprint, ensuring energy security and towards geopolitical aspirations. For Beijing, the Indian Ocean serves as a platform to counterbalance U.S. influence in the Asia-Pacific region. (Khalid, 2021)

With over 7,500 km of coastline and some 1200 Islands along with offshore oil infrastructure, India is directly influenced by geopolitical developments in Indian Ocean. India is amongst some of the fastest-growing economies in the region, if not beyond. More than 90 percent of India's international trade by volume and over 70 percent by value is carried over the seas. Nearly 80 percent of the country's crude oil requirement is

imported by sea using the international sea lanes across the Indian Ocean. Offshore gas fields also contribute to 80 percent of India's domestic natural gas production. (Indian Maritime Security Strategy, 2014) While oil shipments from Persian Gulf are crucial for India's economic growth, the country aspires greater connectivity with trade markets in Africa, the Middle East, and Southeast Asia. Beyond economic considerations, Indian Ocean is integral to India's security paradigm, allowing New Delhi to assert its influence and project itself as a net-security provider. As China expands its presence in the region, India seeks to preserve and enhance its strategic position, making the Indian Ocean a linchpin for economic growth, security, and regional influence. (Dhruva, 2016)

4. Contemporary Developments in Indian Ocean

The Sino-U.S. competition for power is gradually transforming the geopolitical dynamics of Indian Ocean region. China has enhanced its maritime presence in Indian Ocean through Belt and Road Initiative (BRI) and is periodically increasing its naval footprint to safeguard these projects. United States and India view these developments with major concern and perceive growing Chinese influence as threat to their national interest. To counter China' growing foot print, U.S. has ramped up its naval expansion, developed new regional alliances and has undertaken several strategic agreements with regional powers. In sum, security dynamics, economic interests, and geopolitical competition have created security dilemmas, spurred naval arms race, and have threatened the strategic stability in the Indian Ocean. Short details of major developments underway in the Indian Ocean are stated below.

4.1. China's Belt and Road Initiative (BRI)

In 2013, Chinese President Xi Jinping launched "One Belt One Road (OBOR)" in 2013 which was re-named as "Belt and Road Initiative (BRI)" in 2017. BRI comprises of Maritime Silk Road (MSR) and Silk Road Economic Belt. As far as the Silk Road Economic Belt is concerned, it entails overland infrastructure that in turn include existing and proposed networks joining Central Asian states to South Asia, oil-rich Middle East, and beyond to Africa and even Europe. The route of MSR itself implies its strategic significance as it conjoins coastal cities of China with Pacific alongside Indian Ocean. The route extends to volatile South China Sea, Malacca Strait, and Bay of Bengal. It further goes to Arabian Sea, Gulf of Aden and to strategically significant Persian Gulf. (Odhiambo, 2020)

4.2. China Pakistan Economic Corridor (CPEC) and Gwadar Port

China-Pakistan Economic Corridor (CPEC) is the flag ship project of China's Belt and Road Initiative (BRI). Initially valued at $46 billion, the investment volume of CPEC has increased to $65 billion as of 2022. (Asif, 2022). CPEC is a vast network of infrastructure projects that includes highways, railways, and energy projects spread throughout country. The most important aspect of CPEC is the connectivity of Gwadar Port in southwestern Pakistan to China's northwestern region of Xinjiang. The port of

Gwadar is strategically located in close proximity to the Strait of Hormuz from where nearly 21 million barrels of oil, equivalent of 21 percent of global oil consumption transits on daily basis (Abdullah, 2023).

While most maritime chokepoints can be bypassed by using other shipping routes, the Strait of Hormuz has no feasible alternative. Therefore, the port holds immense economic and strategic importance, particularly in terms of expanding geopolitical footprint through the maritime domain. (Caliskan, 2022).

With its full functional capability, Gwadar port will provide direct connectivity to China with Persian Gulf, Africa, Middle East and other regions circumventing Strait of Malacca and much talked about infamous "Malacca dilemma". This will enhance China's strategic resilience and improve security of energy and trade flows. Additionally, it will provide shortest feasible connectivity between land-locked resource rich Central Asian Republics (CARs) and Arabian Sea (James, 2019). In simple words, Gwadar port project of Pakistan is one of major economic growth project reshaping global economy. It is a perfect hub for the region drawing trade from China, Central Asia, and Afghanistan, and transporting it to other regions via Arabian Sea.

4.3.   String of Pearl and Diamond of Necklace Strategies

The United States has always viewed China's BRI project with great concern. From economic perspective, Washington perceives BRI as manifestation of Beijing's debt trap diplomacy. This policy, according to Western analysts, may lead to unsustainable levels of debt for participating countries, potentially creating economic dependencies that could compromise their sovereignty. The U.S. government has also raised transparency issues, expressing doubts about the lack of clarity in BRI agreements. From a strategic perspective, the U.S. views China's expanding influence through the BRI as a challenge to its own waning global leadership, raising concerns about the geopolitical implications of China's increased presence in strategically important regions (Daniel, 2022).

India has also repeatedly expressed reservations about China's BRI project. According to New Delhi, China is periodically encircling India by developing infrastructure at key trade routes under the pretext of BRI, and gradually enhancing naval presence. As discussed in the preceding discourse, this strategy is often termed as "String of Pearls Strategy". Djibouti is the first state from where strings' western half starts and China has built its military base in Obock region here. This would allow China to conduct surveillance over Bab-el- Mandeb and other parts of the Western Indian Ocean. Gwadar port is considered by India as the most potent and most concerning point in this string particularly when China-Pakistan collaboration in naval domain is taken into account. Maldives' Feydhoo Finolhu Island is the home to third base in the western string. As far as eastern half is concerned, it comprises of Bangladesh's Chittagong port, Myanmar's Kyaukpyu port, Malaysia's Kuantan base and Maura base in Brunei. (Nawaz, 2023)

As alluded to earlier, to counter string of pearl strategy of China, India has also been working on similar strategy unofficially dubbed as 'Necklace of Diamonds'. This necklace comprise of Chabahar port in Iran, Oman's Duqm base, naval air-base in Seychelles' Assumption island, tri-service command in Andaman & Nicobar islands, Indonesia's Sabang base, and Singapore's Changi base. Alongside the Necklace of Diamonds, there is another speculated double fish hook strategy which entails amalgamation of military alliance in region with key actors such as U.S., France, Australia, and island states for securing Indian Ocean as well as containing China's maritime endeavors in region. (Nawaz, 2023)

4.4.   Quad, AUKUS, and Indian Ocean

The Quadrilateral Security Dialogue, commonly known as the Quad, is a strategic forum comprising the United States, Japan, India, and Australia. Initially established in 2007, the Quad has gained renewed momentum in recent years as a response to growing China's influence in the Indo-Pacific region. While Quad officially focuses on a range of issues, including economic development, infrastructure, and climate change, but its underlying security dimension has drawn particular attention. This security dimension is underpinned by navies of Quad countries.

Malabar Naval Exercises, although a separate initiative originally conceived during Cold War between navies of the U.S. and India, have now become physical manifestation of the Quad's co-operation in naval domain. The inclusion of Australia in the Malabar Exercises in 2020 expanded Quad's footprint, showcasing a growing regional collaboration within the framework. The joint naval drills contribute to the Quad's efforts to enhance interoperability among its members, fostering better coordination and response capabilities in the maritime domain (Shahid, 2021).

China has termed Quad as Asian NATO, and has characterized Quad as a containment alliance to counter China influence in the region. Chinese officials have repeatedly criticized Quad, arguing that it may disrupt the regional Balance of Power, and can have destabilizing impact on global scale.

Unlike Quad, AUKUS is a purely military agreement. It's the trilateral security partnership between Australia, United Kingdom and United States announced in September 2021. It is perceived as the groundbreaking agreement that aims to enhance defense and security cooperation among the three nations. The centerpiece of AUKUS is the provision of nuclear-powered attack submarines (SSN) to the Royal Australian Navy (RAN) in a deal worth $368 billion. These submarines will be configured on Royal Navy's next generation SSN-R project and will be called SSN-AUKUS.

The provision of nuclear propulsion technology for submarines marks first instance in history of sea based strategic deterrence. Australian submarines, as a consequence, will have extended staying time while on operational deployments. In parallel, RAN will be acquiring long-range cruise missiles and F-35 stealth aircrafts from

United States which will significantly enhance the combat outreach of Australian forces. The delivery of cutting-edge technology to the Australian armed forces implies that the Washington is leveraging Australia as a frontline ally in its efforts to counter China. As part of AUKUS, Australia will eventually attain offensive posture instead of traditional defensive posture in Indo-Pacific. This transformation is expected to create new set of strategic complications in entire region. It will intensify arms race and will threaten the strategic stability. In parallel, transfer of submarine related nuclear propulsion tech under the ambit of AUKUS is poised to undermine non-proliferation regimes, encouraging other nations to seek similar capabilities. In sum, AUKUS substantiates the fact that increasing military might of China has reshaped the balance of power, compelling U.S. to undertake extraordinary decisions in order to maintain its global ascendancy.

4.5.   Indo-U.S. Strategic Partnership

India and the United States have signed several strategic agreements to enhance bilateral cooperation and safeguard their increasingly overlapping interests in Indo-Pacific. There are three foundational defence agreements between the U.S. and India. These are, Logistic Exchange Memorandum of Agreement (LEMOA); Communication Compatibility and Security Agreement (COMCASA) and the Basic Exchange and Cooperation Agreement for Geospatial Intelligence (BECA).

LEMOA, signed in 2016, allows the armed forces of two countries to use each other's facilities for replenishment of supplies and services on a reciprocal basis. This agreement streamlines logistical support, facilitating a more efficient response to regional and global contingencies. Signed in 2018, COMCASA enables the secure exchange of communication and military grade data-sharing capabilities between India and the United States. This agreement facilitates the use of advanced defense systems, including encrypted communication equipment. By allowing for secure communication during joint military exercises and operations, COMCASA strengthens the strategic coordination between India and the U.S. It also supports India's efforts to modernize its defense capabilities and promotes the integration of advanced technologies into its military infrastructure. BECA was signed in 2020 and is a critical agreement that enhances the geospatial intelligence-sharing capabilities between both countries. BECA enables the exchange of geospatial information, topographical, nautical, and aeronautical data, allowing military forces of both nations to enhance their situational awareness and improve the accuracy of missile systems, targeting, and navigation. (Philip, 2020)

On one axis, these strategic agreements represent depth of Indo-U.S. strategic partnership, but on another they showcase the shared dilemmas of both nations against China. These agreements are destabilizing in nature as they are compromising the Balance of Power in Indian Ocean, particularly between India and Pakistan. The intensification of security dilemmas in maritime domain has triggered naval arms race which threatens the strategic stability in Indian Ocean.

4.6. India Aggressive Naval Build-Up

Indian Navy is in phase of rapid naval force expansion since last decade with emphasis toward indigenization. This fleet modernization includes commissioning of more warships and submarines. In parallel, the naval aviation and nuclear arm will also be modernized and expanded by incorporating more and superior systems.

India Navy surface combat fleet currently consists of ten destroyers, sixteen frigates, several corvettes, amphibious warships, patrol crafts and support vessels. By 2035, Indian Navy is eyeing to commission 175 warships by adding new vessels and replacing its obsolete surface fleet with additional modern warships. Obsolete Rajput class destroyers are in phase of replacement by four Visakhapatnam class destroyers. Seven new Nilgiri class frigates and four Talwar-III class frigates are in different phases of construction. In parallel, IN will be inducting dozens of new corvettes for surface and sub-surface warfare at regional scale.

IN has recently commissioned its first ever domestically produced air craft carrier named INS Vikrant. (Lendon, 2022) With INS Vikramaditya already in service, INS Vikrant is the second aircraft carrier in IN disposal. There are plans to construct a bigger and more capable aircraft carrier, tentatively called INS Vishal (IAC-02). But till date, no concrete decision has been made due to conflicting debates regarding its feasibility and limitations of resources (Bedi, 2022). Similarly India is expanding its surface-warship fleet by adding more warships with more sophisticated weapons and sensor suite. These warships are of varying tonnage. On higher axis, India is developing destroyers and frigates, while on lower axis it is producing corvettes and patrol vessels. It's worth noting, that India has gradually attained high level of autonomy as far as designing and construction of warships is concerned. (Atri, 2023)

The sub-surface modernization of Indian navy has conventional as well as nuclear dimension. IN is in process of commissioning six Kalveri class diesel electric submarines – a version based on French Scorpene submarine (Vavasseur, 2022). As a follow on project, called Project 75-I, IN is planning to acquire six more submarines with improved capabilities. These submarines will be built after collaboration with domestic and foreign shipyards. Various shipyards in Europe and Asia have submitted their bids for the tender. However, the final submarine design is yet to be decided (Kumar, 2022).

Indian Navy (IN) is also custodian of India's sea-based nuclear strike capability. Currently IN has one operational nuclear ballistic submarine (SSBN) – INS Arihant. Second SSBN, INS Arighat, is expecting commissioning in 2024. (Abhijit, 2023) Third SSBN, designated as S4 or unofficially as Arihant-stretched, was secretly launched on November 23, 2021. (Rahul, 2021) The launch was not reported by official sources suggesting that India wants to keep its sea-based nuclear deterrent up gradation plans secretive. In total, India is expected to induct four SSBNs by 2030, and potentially more at later stages (Sauray, 2016). The expansion of IN SSBN fleet will significantly strengthen

India's sea-borne assured second strike capability. But on flip side it will intensify security perceptions of neighboring nations, particularly Pakistan, forcing them either to take counter actions or develop analogous capabilities. A tabular comparison of India Navy current and future major combatants is given below:

Table: 1

Warship Type	Total Number in 2023	Expected Number in 2033s	Comments
Air Craft Carrier (STOBAR)	2	3	INS Vishal will be third aircraft carrier
Landing Platform Dock (LPD)	1	4	4 new LPDs will be built
Destroyers (DDGs)	10	18	8 NG Heavy Destroyers/ Cruisers will be built
Heavy Frigates (6000+ tons) (FFG)	3	10	7 Nilgiri class FFG will be operational
Standard Frigates (4000+ tons) (FFG)	9	10	10 Talwar class frigates will be operational
Multi-Mission Corvettes (FFL)	0	8	8 NG multi-mission Corvettes will be built
Anti-Submarine Corvettes (ASW FFL)	5	16	16 ASW Shallow Water Crafts will be operational
Missile Corvettes/Boats (ASuW FFL + FACM)	13	6	Six NG Missile Corvettes will be built
Offshore Patrol Vessels (OPVs)	10	21	11 NG-OPVs will be built in coming years
Mine Countermeasure Vessels (MCMV)	0	12	12 new MCMVs will be built
Nuclear Ballistic Submarines (SSBN)	1	4	INS Arihant, INS Arighat and two S-4 class SSBNs
Nuclear Attack Submarines (SSN)	0	6	Six Project 75-A SSNs will be added
Hunter Killer Submarines (SSK)	15	18	Six Type 75-I SSKs will be added

Contemporary Indian Navy Major Combat Vessels and Future Projection (Hackett et al., 2023)

4.7. New Generation Asymmetric Threats

Iran, although a smaller player in Indian Ocean, has showcased capability to impart significant influence on regional geopolitical environment. As a littoral state with

control over the Strait of Hormuz, Iran has the ability to influence and disrupt maritime traffic in the region. Thus, Iran's geographical proximity to the Persian Gulf provides it with a strategic advantage in the Indian Ocean, enabling the country to use its position as a deterrent against the United States and other external actors. Similarly, Bab el-Mandeb, another strategic choke point, is also under the influence of Iran-backed Houthis militia. Both Iran and Houthis have successfully demonstrated their capability to block sea lanes passing through Persian Gulf and Red Sea by employing asymmetric tactics. By controlling these two key choke points of Indian Ocean, Iran has been able to impart its influence at global scale.

Perhaps the most impeding non-traditional threat is currently being witnessed in the Red Sea. Houthis, a non-state faction backed by Iran, have been using missiles and drones to target merchant and naval vessels across Bab-el-Mandab. Majority of these missiles and drones are rudimentary designs, but pose significant threat when employed in mass-strikes. Although Houthis claim that they are targeting American and Israeli merchant vessels only in response of Israel's aggression against Palestine. But situational ambiguity and fog of crisis has placed entire shipping at risk. Numerous shipping companies, including industry giants like Maersk, Shell, and BP, have already halted their operations in the Red Sea. The majority of shipping vessels are now opting for the longer route around the Cape of Good Hope to reach the Atlantic Ocean. This shift is anticipated to reduce shipping operational efficiency by around 25 percent, placing additional strain on the global supply chain and adversely affecting the worldwide economy (Jenni, 2023). The impact of Houthi attacks is further evident as reportedly over 586 container ships have rerouted around Africa by first half of February, leading to a 82 percent decrease in container tonnage transiting through the Suez Canal since the onset of Houthi attacks. Redirecting ships around the southern tip of Africa in the Indian Ocean is estimated to incur up to an additional $ 1 million in fuel costs for each round trip between Asia and northern Europe emitting approximately 70 percent more greenhouse gas emissions per trip. (UNCTAD, 2024)

To enhance maritime security in the Red Sea shipping corridor, the United States has lately initiated a multinational security operation code named, "Operation Prosperity Guardian". This operation falls under the purview of Combined Task Forces and is supervised by Task Force-153. U.S. Navy, Royal Navy, and French Navy have successfully intercepted numerous drone and missile strikes by the Houthis yet maintaining this defensive cover is challenging. The deployment of a large number of expensive air-defense and anti-ballistic missiles is unsustainable against continuous attacks by the Houthis using inexpensive and rudimentary drones and missiles. Even targeted strikes by the U.S. and the U.K. against Houthi military assets have not deterred further attacks. The most important takeaway is that in the past; no militant organization has used such long-range and destructive weapons against international shipping on such a scale. Global navies in general and maritime industry in particular were found ill prepared to counter the scale and level of such a formidable threat. This, definitely, will

have far reaching consequences for maritime security and global economy. (Kusovac, 2023)

5.   Implications for Pakistan

With a coastline stretching over 1000 kms along the Arabian Sea and proximity to strategic access points to the northern entrance of the Indian Ocean, Pakistan's position is increasingly important in Indian Ocean. The firmly established friendly ties with China, historic relations with United States, and deep seated rivalry with India, Pakistan is also at the epicenter of unfolding great power politics in Indian Ocean. There is hence need to explore available strategic options with a view to safeguard Pakistan's national interests and contribute towards regional strategic stability via sustenance of Balance of Power.

5.1.   Threat to CPEC and Gwadar Port

The power competition in Indian Ocean is likely to have profound impact on Pakistan's future objectives. This is particularly true for China-Pakistan Economic Corridor (CPEC) and commercial operations of Gwadar port. China's role in the region has been a driving force behind the development of CPEC. It is a stimulus to enhance connectivity and open up new trade routes for Pakistan. The U.S. Indo-Pacific strategy that aims to contain China and its influence in the Indian Ocean has brought strategic complications which could impact the smooth functioning of CPEC.

With ambitions to act as net-security provider in Indian Ocean, India has been attempting to disrupt China-Pakistan Economic Corridor (CPEC) and the Gwadar port project through various means. India has been key abettor of militant groups in Balochistan that work to target and sabotage CPEC projects in Pakistan. RAW has reportedly established a special desk within to design and especially target CPEC in Pakistan. Special funds have been allocated to RAW for the purpose. In several terrorist attacks, Chinese nationals have been targeted by hostile outfits, mostly backed by Indian RAW. Additionally, New Delhi has been employing strong diplomatic means, in conjunction with information warfare, to build international opposition against CPEC and related projects. India has been attempting to propose new connectivity projects as well. This is being done to weaken BRI &CPEC. The most recent example is the proposed India-Middle East-Europe Economic (IMEC) corridor, to bypass China-led initiatives, including CPEC. These attempts have failed to materialize but they showcase New Delhi's hostility towards CPEC and Gwadar port.

5.2.   Quad, AUKUS, and Pakistan

The U.S. Indo-Pacific strategy and its increasing defense and economic collaboration with India, especially in maritime domain in the shape of Quad, have major concerns for Pakistan. Given Pakistan's geographical location and its proximity to key maritime routes, increased Quad activities may jeopardize Pakistan's maritime interests. The expanded Malabar series of naval exercises are now actively conducted by Quad in

both Indian as well as western Pacific. The aim of these naval maneuvers is to enhance operational capabilities and interoperability amongst navies of member states. India's active participation in the Quad and its pursuit of enhanced naval capabilities may contribute to a more assertive maritime posture, ultimately impacting Pakistan's maritime security calculus.

While the primary focus of AUKUS is Indo-Pacific region, it will also have significant ramifications in the region of Indian Ocean. In addition to the risks of regional nuclear proliferation, AUKUS agreement has the potential to incentivize other nations to acquire nuclear propulsion technologies by exploiting vulnerabilities in nuclear proliferation control regimes. For example, India, a member of the Quad and a signatory to numerous bilateral security agreements with the United States, consistently anticipates a deeper engagement within Washington's Indo-Pacific strategic framework. Leveraging AUKUS as a pretext, India may seek to obtain similar nuclear propulsion technology from a foreign source (possibly France), for its Project 75-A nuclear attack submarine project (SSN). Given the existing collaboration between France and India in submarine development, the prospect of Indo-French cooperation for construction of nuclear attack submarines cannot be dismissed easily.

The potential acquisition of advance nuclear propulsion technology as AUKUS provides, India can significantly augment its nuclear submarine fleet. Historically, Indian Navy operated only one SSN, dubbed Chakra class during Cold War. The nuclear submarine was leased from USSR. Unlike nuclear ballistic submarines (SSBNs), which are meant purely for nuclear deterrence, SSNs are employed in conventional conflict and therefore pose extreme threat to Pakistan Navy. Likewise, another grave concern is improvement in Indian navy's nuclear propulsion technology for its SSBNs which it can acquire with French propulsion technology now available to it. Unlike Australia, which is non-nuclear weapon state, India has nuclear weapons and an active sea-borne nuclear retaliatory program based on its domestic fleet of nuclear ballistic submarines. INS Arihant has also completed its deterrent patrol in recent years. In other words, the ballistic missile submarine is ready for operational deployment. Thus, in case of India, an AUKUS style agreement will result in rapid proliferation of nuclear arms in Indian Ocean. This is not to mention Indo-US nuclear agreement which has previously dented the Non-Proliferation regime (NPT). This allowed India to acquire nuclear fissile material from overseas and spare some local reactors solely for production of weapon grade uranium for its ballistic missile submarines. Such developments compel Pakistan to opt for analogous capabilities to restore Balance of Power. The proliferation of nuclear submarines in the Indian Ocean will disrupt the regional balance of power and trigger a naval nuclear arms race. The growing number of nuclear submarines will present substantial challenges in terms of command and control and the safety of nuclear assets in Indian Ocean, which in extreme case, can have global consequences.

5.3.   India-U.S. Strategic Agreements and Impact on Pakistan

The strategic agreements between India and the United States have direct impact on Pakistan's strategic calculations. In brief, three such factors can be highlighted. First, the enhance interoperability, availability of high-end equipment, access of advance intelligence, and expansion of logistical network will significantly enhance India's military capabilities, particularly in Indian Ocean. Indian Navy has expanded its fleet of

U.S. made cutting edge P-8I Poseidon Maritime Patrol Aircrafts (MPAs) which have significantly augmented India's anti-submarine warfare capability (ASW) (Xavier, 2021) besides substantially adding to Maritime Domain Awareness (Situational Awareness). In parallel, India is in process of procuring 24 MH-60 Romeo ASW helicopters (Elizabeth, 2021). Moreover, the materialization of 31 MQ-9C drones from U.S. will expand India's intelligence, surveillance, and reconnaissance (ISR) outreach in maritime domain (Dinaker, 2023). These procurement and capability enhancement will distort Indo-Pak Balance of Power and intensify Pakistan's security dilemma.

Second, the intensifying defense cooperation between India and the U.S. will degrade Pak-U.S. mutual relationship, particularly in military domain. The United States view India as key player in Indian Ocean for containing China, both through economic and military means. From Washington perspective, a strong Indian navy will be better positioned to counter China, not only in Indian Ocean but in western Pacific as well.

By denying access to high-end U.S. equipment and cutting military aid to Pakistan, Washington seeks to render Pakistan into position where it will no longer be able to challenge India military particularly naval might. This will allow - at least from Washington's perception – India to dedicate majority of Indian military potential against China on land, someting in line with U.S. interests.

Third, U.S. support for India's aggressive naval modernization will pose significant threat to Pakistan's national security. India's rapid naval expansion, including the acquisition of aircraft carriers, advanced surface ships, submarines, and naval aircrafts, signify a shift towards a more assertive maritime posture. In addition, Indian plans to develop fleet of nuclear submarines – both SSNs and SSBNs - will introduce new set of complexities and uncertainties in an already fragile Indo-Pak strategic balance. India's pursuit of a robust sea-based nuclear deterrent throws challenges at Pakistan's security calculus and necessitates a reassessment of its own naval capabilities. The nuclear dimension in naval arms race will further heighten the tensions, erode stability whilst increasing the likelihood of inadvertent outbreak of a conflict.

5.4.   Blockade of Choke Points and Pakistan Maritime Trade

The employment of rudimentary long-range weapons by non-state actors at sea has raised new set of challenges for maritime security. The new standards in warfare set

by Houthis have showcased that such actors can disrupt maritime activities, particularly at choke points and virtually impose naval blockade. Pakistan is overwhelming dependent on sea-commerce for economic sustenance and majority of its maritime trade transits through Persian Gulf and Red Sea. Any crisis or blockade situation at these crucial maritime nodes will have profound impact on strategic and economic interests of Pakistan. In particular, as a net importer of oil, Pakistan's energy security would be highly vulnerable in the event of disruptions in the supply chain caused by blockades at these straits.

6. Counter-Options for Pakistan

Pakistan has to undertake series of measures to better position itself according to transforming power dynamics in Indian Ocean. By effectively utilizing its strategic position, diplomatic clout, and military prowess, Pakistan can take credible measures to retain regional Balance of Power. The growing complexity and intensification of security challenges in Indian Ocean necessitates robust naval prowess. On one axis, Pakistan Navy must seek enough capability to deter Indian Navy on conventional scale. On other side, Pakistan Navy should be able to counter non-traditional and low-intensity threats to safeguard its maritime routes and preserve sea lines of communications. However, the most important approach will be to effectively employ diplomacy through maritime domain for expansion of its influence and development of robust partnerships with regional and global powers.

6.1. CPEC and Gwadar Port as Strategic Leverage

Strategic diplomacy, centered on CPEC, offers Pakistan an effective tool to strengthen ties with regional countries and major stakeholders in the world. Pakistan can effectively utilize CPEC, to address economic and developmental challenges. Early operationalization of CPEC can be an effective instrument in shaping a balanced power dynamics in the Indian Ocean.

Serving as the linchpin of CPEC, Gwadar port can bolsters Pakistan's strategic position as a key player in regional geopolitical environment. Once fully operational, Gwadar port will act as a strategic node for the maritime transit trade. This will enable Pakistan to diversify its economic activities and reduce dependence on traditional trade routes. The role of Gwadar port in maritime connectivity will bolster economic prospects and alongside contribute to the reduction of India's influence in the Indian Ocean. Development of shipyard at Gwadar alongwith a naval station in close proximity by Pakistan Navy can profoundly enhance Pakistan's strategic relevance in South Asia as well as in Middle Eastern regions.

In addition, full development of Gwadar port could foster diplomatic alliances with key players, creating a counterbalance to India's influence and providing a diplomatic leverage. Once Gwadar becomes a symbol of regional stability, offering economic opportunities and cooperation, it will diminish India's narrative of being the regional hegemon or 'net security provider' as it professes to be. In essence, Gwadar's

multifaceted contributions position Pakistan as a crucial player in reshaping the geopolitical dynamics in the Indian Ocean, countering India's influence and fostering own strategic interests.

6.2. Modernization of Pakistan Navy (PN)

For retaining regional Balance of Power, it's crucial to augment naval prowess of Pakistan. In order to counter aggressive expansion by Indian navy, Pakistan Navy (PN) is now in process of undertaking necessary countermeasures. This involves expansion of naval fleet by induction of new platforms, replacement of older systems with modern high-end systems, and procurement of next generation capabilities at all tiers of naval forces. The roadmap for Pakistan naval modernization has been presented by both former Chief of Naval Staff (CNS) Admiral Zafar Mahmood Abbasi and Admiral Muhammad Amjad Khan Niazi on separate occasions during the past few years.

PN envisions to commission fifty warships which will include twenty major warships in near future. PN has recently procured four Type-054AP frigates from China which have replaced obsolete Tariq class frigates. From Romania, PN has purchased two Yarmook class corvettes while two additional vessels will be commissioned soon. From Turkey, Pakistan is acquiring four Milgem class corvettes – with each pair built in Turkey and Pakistan respectively. All four vessels have been launched. As a follow on project, Pakistan is in process of developing Jinnah class frigates which will be constructed indigenously.

In the realm of underwater forces, Pakistan Navy is currently modernizing its existing Khalid class submarines from Turkey, and is also in process of acquiring eight Hangor class submarines from China. In aerial domain, PN has raised fleet of RAS-72 ASW aircrafts (Dawn, 2023) and is in process of acquiring Sea-Sultan long-range maritime patrol aircraft (Xavier, 2021). In addition, PN is already operating CH-4B combat drones of Chinese origin and is evaluating TB-02 combat drones from Turkey. (Ibrahim, 2022) Beside induction of various platforms, PN is also developing and deploying next generation missile systems featuring improved range, speed, and sensors. For Pakistan, development of credible and effective defensive naval capability is crucial to deter potential aggression from Indian Navy, ensure preservation of national maritime interests and above all Balance of Power for strategic stability.

6.3. Active Diplomatic Engagement through Naval Domain

Pakistan can employ naval diplomacy as a strategic instrument to counter India's expanding geopolitical influence in the Indian Ocean by strengthening relations with regional and extra-regional players. Engaging with neighboring countries through regional forums and organizations, such as the Shanghai Cooperation Organization (SCO) and the Economic Cooperation Organization (ECO), can foster economic integration and promote collective security measures. Strengthening ties with key international players, including China, Russia, and Middle Eastern countries, can

facilitate Pakistan to overcome the negative fallout from India's growing assertiveness and deepening Indo-U.S. collaboration in Indian Ocean.

Instead of joining certain axis of power, Pakistan can adopt a balanced approach in foreign relations, maintaining friendly ties with the United States as well as China. Mutual co-operation among naval forces can be strengthened through diversification of bilateral and multi-lateral exercises, port visits, and joint patrols. Similarly collaboration in the domain of academia, joint-projects, and technology sharing can deepen Pakistan relation with allied countries. In particular, Pakistan can formulate friendly relation with its South Western neighbor Iran using maritime domain as tool of co-operation. Iran has direct influence in Persian Gulf and exercise dominance over Bab el-Mandeb through Houthis in Western Yemen. By avoiding hostilities and undertaking mutual confidence building measures, Pakistan can significantly minimize vulnerability of its maritime trade transiting through Persian Gulf and Red Sea.

On national scale, Pakistan Navy can further diversify the scope of its multinational AMAN series of exercises to effectively meet the diplomatic requirements of future. Similarly by actively participating in combined task forces, interoperability with foreign navies can be developed to collectively counter shared threats – particularly in non-traditional realm. In essence, naval diplomacy emerges as a multifaceted strategy that allows Pakistan to assert itself as a key player in shaping the maritime dynamics of the Indian Ocean, countering India's influence, and safeguarding its own strategic interests.

7.   Conclusion

The intensification of great power rivalry in the Indian Ocean has profound implications for Pakistan. Washington's China containment policy in Indo-Pacific involves development of new alliances and collaborative frameworks like Quad and AUKUS. Similarly, deepening Indo-U.S. strategic co-operation is also a product of growing interests of alliance to counter increasing footprint of China in the Indian Ocean especially CPEC under BRI. India, with ambition of becoming a sole regional hegemon (policeman), is actively projecting itself as net-security provider in Indian Ocean. India's assertive naval modernization is a vivid reflection of these ambitions. These developments, however, are destabilizing as they have intensified regional security dilemmas and triggered naval arms race. Situated at the crossroads of complex geopolitical forces, Pakistan faces both challenges and opportunities. The China-Pakistan Economic Corridor (CPEC) has the potential to emerge as a linchpin in transforming geopolitical landscape, aligning Pakistan with China's broader Belt and Road Initiative and positioning the country as a key player in maritime trade routes. The U.S. Indo-Pacific strategy and India's maritime ambitions pose challenges, necessitating a calibrated and adaptive response from Pakistan. The strategic options available to Pakistan encompass a spectrum of diplomatic, sea based nuclear, naval, economic, and security measures, requiring astute decision-making to safeguard national interests and foster

regional stability. It also necessitates a close collaboration with China and PLA navy to ensure Balance of Power in the region.

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Utilizing Social Media Platforms for Soft Power Projection in East Asia: The Role of Digital Diplomacy (2015-2025)

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Abstract

This study investigates the role of social media platforms in promoting digital diplomacy and soft power projection in East Asia. The research uses quantitative analysis to gain a thorough understanding of regional diplomatic strategy. The study of how East Asian countries strategically use social media to increase their international influence is guided by soft power and network diplomacy theoretical frameworks. The study focuses on significant events, such as diplomatic summits like the ASEAN Regional Forum and the East Asia Summit, cultural exchanges like China's Confucius Institutes and Japan's Cool Japan initiative, and public diplomacy initiatives like South Korea's K-pop diplomacy. These events serve as case studies for demonstrating effective examples of digital diplomacy in action. This multidisciplinary study contributes to a more nuanced understanding of the interactions between social media, soft power, and international politics. Aside from diplomatic summits and cultural exchanges, other notable events such as crisis responses and public outreach initiatives have a huge impact on moulding views and affecting international relations. For example, swift information transmission and coordinated social media reactions during natural catastrophes or geopolitical tensions may demonstrate a country's competence, resilience, and readiness to engage with other countries. Similarly, public outreach programmes that highlight a country's successes in technology, healthcare, or environmental sustainability can help to boost its reputation and appeal on a worldwide scale. The findings are useful for policymakers, diplomats, and researchers who want to use digital platforms to project soft power effectively in East Asia and elsewhere.

Keywords: Digital diplomacy, East Asia, soft power

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1. Introduction

In the ever-changing environment of contemporary international relations, the digital era has brought about a fundamental shift in diplomatic procedures and the use of soft power. At the core of this shift is the pervasive impact of social media platforms, which have matured into powerful tools for changing public opinion, encouraging cultural exchanges, and magnifying a country's worldwide standing. This study investigates the complex relationship between digital diplomacy, social media, and the projection of soft power in East Asia from 2015 to 2025.

This study has major significance since it looks deeply into how East Asian countries deliberately use social media platforms to boost their soft power and strengthen their standing on the global arena. As East Asia, which includes strong nations such as China, Japan, and South Korea, gains geopolitical relevance, knowing the subtleties of digital diplomacy becomes not just relevant but crucial.

China, Japan, and South Korea are at the vanguard of this developing scene, each adopting their own techniques for projecting soft power through social media. South Korea, for example, uses its thriving cultural economy, particularly the worldwide phenomenon of K-pop, to attract foreign audiences and broaden its soft power reach. South Korea has effectively built a narrative that resonates internationally by meticulously cultivating its entertainment industry and adeptly utilising social media channels, therefore increasing its international impact.

Similarly, China has emerged as a powerful participant in digital diplomacy, using its economic might and strategic narratives to assert its worldwide influence. Megaprojects like the Belt and Road Initiative (BRI) are heavily pushed on social media channels, allowing China to efficiently distribute its messaging and impact global attitudes. China hopes to strengthen its soft power and broaden its area of influence by integrating its diplomatic policies with the digital arena.

Furthermore, the Association of Southeast Asian Nations (ASEAN) is critical to promoting regional cooperation among East Asian countries. ASEAN aims to improve regional connections and raise the collective voice of East Asian states on a global scale through joint initiatives and diplomatic engagements enabled by social media.

In this dynamic world, crises and challenges create both dangers and opportunities for East Asian countries to demonstrate their diplomatic prowess and resilience via social media platforms. The timely broadcast of information and coordinated crisis responses may impact worldwide impressions, showing a country's competence and readiness to work in the face of hardship.

Furthermore, public outreach programmes have emerged as effective methods for improving East Asian governments' worldwide reputation. These initiatives seek to shape favourable opinions of East Asian countries and encourage worldwide goodwill by highlighting successes in technology, healthcare, and environmental sustainability through engaging social media storytelling.

This multidisciplinary study aims to elucidate the complicated relationship between social media, soft power, and foreign relations in East Asia. By examining major events, crisis responses, and public outreach activities, this study hopes to provide important insights for politicians, diplomats, and researchers navigating the complex landscape of digital diplomacy and soft power projection in the area and beyond.

2. Literature review

Early studies on digital diplomacy was largely concerned with the introduction of digital technology and its influence on diplomatic practises. Corneliu Bjola and Marcus Holmes (2015) investigated the history of digital diplomacy from its early phases to its current manifestations, highlighting the transformational significance of social media platforms in changing diplomatic contacts. They emphasised the transition from conventional, state-centric diplomacy to networked diplomacy, which is distinguished by greater connectedness and engagement among varied stakeholders.

Recent studies have expanded on this basis, delving deeper into the dynamics of digital diplomacy in various geographical contexts, such as East Asia. Lee and Kim (2016) performed a comparative review of digital diplomacy methods in East Asian nations, identifying differences in strategy, tactics, and outcomes. They recognised South Korea, China, and Japan as significant actors in the area, with each taking a unique strategy to using social media for soft power projection.

Soft power projection in East Asia has revealed the strategic importance of cultural diplomacy, public outreach efforts, and public diplomacy activities. Joseph Nye's key work on soft power (2004) established the theoretical foundation for understanding how governments might exert influence through attraction and persuasion. Subsequent studies used Nye's paradigm to examine East Asian governments' soft power initiatives, notably in the areas of cultural exports, entertainment, and cultural heritage.

Comparative evaluations of soft power projection in East Asia have found subtle disparities in methods and consequences. Min-Hyung Kim (2018) did a comparative research of South Korea's soft power strategies in relation to Japan, emphasising the importance of cultural sectors such as K-pop and anime in improving national image and impact. Kim explained the variables that contributed to the success of South Korea's soft power programmes and the difficulties Japan encountered in adjusting to digital platforms by contrasting the two examples.

Social media platforms have transformed diplomatic interaction, creating new opportunities and difficulties for East Asian states. Studies have looked into how social media influences public opinion, discussion, and policy consequences. Thompson and Grigoryan (2019) undertook a cross-national research of East Asian governments' social media use, identifying differences in adoption rates, content strategy, and engagement measures.

Comparative studies have attempted to identify best practises and lessons learned from digital diplomacy activities in East Asia. Huang and Wu (2018) contrasted China's social media policies to those of South Korea and Japan, identifying the variables that contribute to China's success in projecting soft power through platforms such as WeChat and Weibo. By evaluating each country's unique approach, the study shed light on the connection between cultural narratives, political message, and audience reaction.

Despite the numerous potential provided by digital diplomacy and social media platforms, East Asian governments confront a number of problems while traversing this complicated terrain. Studies have focused on topics such as information control, censorship, and the spread of disinformation on social media. Choe (2019) investigated the consequences of government censorship and surveillance for digital diplomacy in East Asia, focusing on the contradictions between openness and security in the digital arena.

Comparative assessments have also revealed the technological, cultural, and language challenges to effective digital diplomacy in East Asia. Lee and Kim (2017) evaluated East Asian nations' digital capabilities, highlighting differences in infrastructure, internet adoption, and digital literacy. The report identified gaps and problems and made recommendations for politicians and practitioners looking to improve digital diplomacy efforts in the area.

The literature on digital diplomacy and soft power projection in East Asia is extensive in academia, encompassing theoretical frameworks, empirical analysis, and comparative research. While early study concentrated on the advent of digital technologies and their influence on diplomatic practises, more recent studies have dug into the strategic implications of digital diplomacy for East Asian countries. Scholars have offered significant insights for policymakers, diplomats, and academics looking to negotiate the complexity of modern diplomacy in the digital era by investigating soft power techniques, social media involvement, and obstacles and possibilities.

3. Social Media's Influence on Diplomatic Strategies

The development and expansion of social media platforms have profoundly transformed the landscape of diplomatic engagement, providing governments with unprecedented opportunity to project soft power and impact international relations (Thompson & Grigoryan, 2019). Governments in East Asia have carefully used social

media to advance their diplomatic goals, boost their soft power, and strengthen their status on the world arena (Lee & Kim, 2016). This article investigates the many ways in which social media impacts diplomatic efforts in the area, using important events, crisis responses, and public outreach programmes as examples of effective digital diplomacy.

One of the key ways that social media influences diplomatic strategy in East Asia is through its ability to broaden the reach and effect of public diplomacy efforts. Governments use social media channels to transmit cultural narratives, highlight national achievements, and promote good pictures of their country to global audiences (Choe, 2019). South Korea's robust cultural economy, notably the global phenomenon of K-pop, has played an important role in strengthening the country's soft power footprint (Ministry of Foreign Affairs of Japan, 2023). South Korea has effectively built a significant worldwide fan following through deliberate marketing on platforms such as Twitter, Instagram, and YouTube, increasing its international impact and encouraging cultural exchanges.

Similarly, China has used social media as a vehicle to portray its soft power on a worldwide scale (Huang & Wu, 2018). The Chinese government's strategic narratives, which are distributed on platforms such as WeChat and Sina Weibo, seek to affect world perceptions and gain support for its diplomatic objectives. Megaprojects such as the Belt and Road Initiative (BRI) have received widespread social media promotion, allowing China to exert and expand its economic and geopolitical power throughout East Asia and beyond.

Furthermore, social media facilitates diplomatic exchanges and information sharing during significant regional events such as the ASEAN Regional Forum and the East Asia Summit (Southeast Asia Research Center, 2022). Governments use networks like Facebook and LinkedIn to schedule meetings, broadcast official announcements, and conduct virtual diplomacy with peers from other nations. The real-time aspect of social media allows diplomats to interact quickly and efficiently, promoting more transparency and collaboration in regional affairs.

In times of crisis, social media acts as a critical instrument for changing world views and exhibiting diplomatic skills (Nye, 2011). Rapid broadcast of information and coordinated crisis responses on platforms like as Twitter and Weibo enable governments to demonstrate their expertise, resilience, and readiness to collaborate with other countries. For example, during natural disasters or geopolitical tensions, East Asian governments frequently use social media to provide updates on relief efforts, express solidarity with affected populations, and coordinate international assistance, thereby increasing their credibility and goodwill on a global scale.

Furthermore, public outreach activities on social media assist greatly to improving the worldwide reputation of East Asian countries (Kurlantzick, 2017). Governments use

compelling narratives and multimedia material to highlight their accomplishments in sectors such as technology, healthcare, and environmental sustainability, establishing themselves as leaders in innovation and advancement. Instagram and TikTok are particularly efficient in reaching younger audiences and fostering good impressions of East Asian countries as vibrant and forward-thinking.

Social media has had a profound and diverse impact on diplomatic strategy in East Asia. From fostering cultural exchange to aiding crisis response and increasing public awareness, social media platforms have become essential instruments for countries aiming to project soft power and alter international relations. East Asian states may manage the intricacies of modern diplomacy and express their global influence by skillfully leveraging the power of social media.

Table 01

Aspect of Social Media	Influence on Diplomatic Strategies	Examples
Amplification of Public Diplomacy Initiatives	Dissemination of cultural narratives, national achievements, and positive images internationally	South Korea's promotion of K-pop on Twitter, Instagram, and YouTube.
Projection of Soft Power	Shaping international perceptions and garnering support for diplomatic initiatives.	China's promotion of the Belt and Road Initiative on WeChat and Sina Weibo.
Facilitation of Diplomatic Engagements	Coordination of meetings, dissemination of official statements, and virtual diplomacy during regional events	Use of Facebook and LinkedIn during ASEAN Regional Forum and East Asia Summit
Crisis Response	Rapid dissemination of information, coordination of responses, and	Utilization of Twitter and Weibo during natural disasters or geopolitical tensions

	showcasing diplomatic competence	
Public Outreach Campaigns	Enhancement of global reputation through engaging narratives and multimedia content	Use of Instagram and TikTok to showcase achievements in technology, healthcare, and environmental sustainability.

This table 1 provides a structured overview of how social media influences diplomatic strategies in East Asia, along with examples for each aspect.

3.1 Effective Utilization of Social Media in Key Events

Social media platforms have become critical instruments for East Asian governments to successfully communicate with worldwide audiences and project soft power during crucial events. These platforms have unprecedented reach and immediacy, allowing governments to share information, influence narratives, and establish diplomatic connections in real time. This section looks at how social media is used efficiently during significant events in East Asia, such as diplomatic summits, cultural exchanges, and disaster response.

Diplomatic summits, such as the ASEAN Regional Forum and the East Asia Summit, provide critical opportunities for East Asian nations to connect with regional and global partners. Social media platforms play an important role in increasing the exposure and effect of such events. Governments use platforms like Twitter, Facebook, and WeChat to deliver real-time updates, issue official pronouncements, and participate in virtual diplomacy with partner nations (Lee & Kim, 2016). Governments use hashtags and specific event sites to ensure that their messages reach a large audience, which includes foreign media outlets, policymakers, and the general public.

Cultural exchanges are effective strategies for creating bridges between nations and developing mutual understanding. Social media platforms allow governments to share their cultural heritage, creative achievements, and societal ideals with a worldwide audience. For example, South Korea's Cool Japan campaign and China's Confucius Institutes use media such as Instagram, YouTube, and TikTok to promote cultural events, language programmes, and artistic performances (Choe, 2019). Governments may increase the visibility and appeal of cultural activities by developing compelling multimedia material and cooperating with influencers and content creators, therefore boosting cultural links and soft power.

During times of disaster, social media platforms serve as critical instruments for governments to communicate efficiently with local and international audiences, coordinate relief operations, and shape views. Whether reacting to natural catastrophes, public health emergencies, or geopolitical conflicts, governments in East Asia use platforms like Twitter, Weibo, and Line to deliver real-time updates, reassure, and organise support (Thompson & Grigoryan, 2019). Governments use official accounts and hashtags to spread their views, combat disinformation, and demonstrate openness and responsibility in crisis management.

Social media platforms are critical in promoting effective communication, involvement, and diplomacy during major events in East Asia. Governments may increase their worldwide awareness, influence, and soft power by effectively exploiting these platforms. Whether fostering cultural exchanges, attending diplomatic summits, or responding to crises, social media is a dynamic and essential instrument for pushing diplomatic agendas and altering international relations in East Asia and beyond.

3.2 Crisis Responses on Social Media and International Perceptions

In today's linked world, social media has evolved into an essential instrument for governments to manage and respond to emergencies quickly and efficiently. The real-time nature of social media platforms enables governments to quickly broadcast information, challenge disinformation, and communicate with both domestic and foreign audiences during times of crisis. This article examines how crisis reactions on social media influence worldwide opinions of countries, using examples from East Asia and beyond.

During crises such as natural disasters, public health emergencies, or geopolitical conflicts, East Asian governments have increasingly relied on social media to disseminate information, reassure citizens, and coordinate rescue operations. For example, in 2011, when Japan experienced the disastrous earthquake and tsunami, the Japanese government used platforms like Twitter and Facebook to broadcast emergency information, coordinate rescue efforts, and give support to impacted populations (Jenkins, 2012). Japan used social media to exhibit transparency, responsiveness, and perseverance in the face of hardship, influencing foreign perceptions of the country as capable and trustworthy.

Similarly, during the COVID-19 pandemic, East Asian governments used social media to disseminate public health recommendations, exchange infection rate updates, and mobilise resources to battle the virus's spread. South Korea, for example, used platforms such as KakaoTalk and Naver to give real-time information about testing sites, quarantine measures, and vaccine initiatives (Kim & Kim, 2020). South Korea was able to reduce the spread of the virus and improve its reputation as a responsible and successful crisis management by communicating transparently and proactively on social media platforms.

In addition to natural catastrophes and public health crises, social media has a significant impact on worldwide views during times of geopolitical tension and conflict. For example, during times of high tension between North and South Korea, both governments use social media channels to communicate their different narratives to the international population. South Korea often uses channels such as Twitter and YouTube to communicate information on diplomatic initiatives, advocate for peace, and counter North Korean propaganda (Lee, 2018). In contrast, North Korea uses state-controlled media such as Uriminzokkiri to communicate its own version of events and mould worldwide impressions of the regime (Cha, 2012). The strategic use of social media by both parties amid geopolitical situations demonstrates its importance in moulding worldwide views and narratives.

Furthermore, social media enables governments to show sympathy and collaboration with other countries during times of crisis, boosting their worldwide status. For example, when Taiwan had a catastrophic earthquake in 2018, the Taiwanese government used platforms such as Facebook and LINE to express thanks for worldwide aid and offer updates on recovery operations (Chang, 2019). Despite its diplomatic isolation, Taiwan won international support and goodwill by demonstrating its resilience and thankfulness on social media platforms.

However, it is critical to realise the limitations and problems of using social media for crisis response. Misinformation and rumours can heighten panic and uncertainty during a crisis, hampering the government's efforts to remain calm and manage the situation properly. As a result, governments must take prudence and implement fact-checking systems to verify the accuracy and dependability of information posted on social media platforms (Gao et al., 2021).

Crisis reactions on social media have a significant impact on international opinions of countries during times of crisis. Governments in East Asia and beyond may improve their worldwide reputation and credibility by giving regular updates, combating disinformation, and displaying resilience and collaboration. However, governments must negotiate the hurdles of disinformation while being transparent and accountable in their social media communication initiatives. Countries that properly use social media may boost their international status while also building trust and solidarity with the global community.

4. Public Outreach Campaigns and Global Reputation

Public outreach programmes help nations shape their worldwide reputation by portraying their beliefs, accomplishments, and contributions to the international community. In an era dominated by digital communication, social media platforms have become critical for propagating campaigns, engaging broad audiences, and shaping global attitudes. This section discusses the importance of public outreach initiatives in

improving worldwide reputation, using examples from East Asia, and emphasises the successful use of social media platforms.

Public outreach campaigns, which are strategic efforts done by governments, seek to communicate vital themes and ideals to local and worldwide audiences. These efforts frequently emphasise a country's assets, innovations, and cultural legacy, therefore improving its reputation and impact on the world arena. Governments use a variety of communication outlets, including conventional media and social media platforms, to construct favourable narratives and foster goodwill among global players.

Japan's "Cool Japan" project serves as an example of a successful public engagement effort. The Japanese government has launched a drive to promote Japanese culture, entertainment, and lifestyle items to overseas audiences. Japan enhances its worldwide appeal and soft power by showcasing its rich cultural history and creative industries through programmes like anime conventions, pop culture festivals, and cultural exchanges (Ministry of Foreign Affairs of Japan, 2023). Social media technologies like as Instagram, YouTube, and Twitter help to expand the Cool Japan initiative's reach and influence, allowing millions of people across the world to connect with Japanese culture and entertainment.

Similarly, South Korea has successfully used public outreach initiatives to improve its worldwide reputation, notably in the fields of technology and innovation. The "Korea Brand & Entertainment Expo" (KBEE), produced by the Korean government, is a venue for showcasing Korean products, technology, and cultural exports to global audiences. South Korea showcases its breakthroughs in electronics, automobiles, and cosmetics through exhibitions, seminars, and cultural performances, establishing itself as a global leader in innovation and creativity (Choe, 2019). Social media sites such as TikTok, Facebook, and LinkedIn help to promote KBEE events, reach target audiences, and stimulate collaboration with international stakeholders.

China's public outreach initiatives have a tremendous impact on its global reputation and influence. The Chinese government's "Belt and Road Initiative" (BRI) is a prime example of a comprehensive public diplomacy effort designed to improve China's connectivity and collaboration with nations along the BRI routes. China's infrastructure projects, trade agreements, and cultural exchanges aim to develop economic relations and foster mutual understanding among participating nations (Huang & Wu, 2018). Social media platforms including as WeChat, Weibo, and Douyin are used to broadcast information on BRI projects, share success stories, and communicate with stakeholders, therefore strengthening China's soft power and worldwide reputation.

Public outreach programmes are essential for countries looking to boost their worldwide reputation and influence. Governments may successfully promote their principles, accomplishments, and global contributions by carefully exploiting social

media channels and connecting with foreign audiences. Examples from East Asia, such as Japan's Cool Japan programme, South Korea's KBEE events, and China's Belt and Road Initiative, demonstrate the ability of public diplomacy to shape views and generate goodwill on a global scale. As governments compete for recognition and influence in an interconnected world, public outreach programmes will remain critical to establishing and maintaining a favourable worldwide reputation.

5. Effectiveness of Different Approaches and Strategies:

The efficacy of digital diplomacy techniques and strategies varies greatly between East Asian nations, reflecting cultural, political, and technological settings. South Korea, for example, has been extremely effective in exploiting its thriving cultural economy, notably K-pop, to increase its soft power footprint abroad (Ministry of Foreign Affairs of Japan, 2023). By promoting K-pop musicians and entertainment material through social media platforms, South Korea has attracted the attention of different audiences globally, therefore increasing its international impact and encouraging cultural exchanges (Lee & Kim, 2016). Similarly, China's strategic narratives, broadcast through platforms such as WeChat and Sina Weibo, have helped the government to exert and expand its sphere of economic and geopolitical influence throughout East Asia and beyond (Huang & Wu, 2018).

However, the efficiency of digital diplomacy initiatives varies throughout the area. In comparison to its East Asian peers, Japan has struggled to adapt to digital platforms and promote its cultural exports on social media (Thompson & Grigoryan, 2019). Despite its rich cultural legacy and creative businesses, Japan's digital diplomacy initiatives have sometimes struggled to connect with global audiences, owing to language and cultural differences.

6. Challenges and Opportunities:

Using social media for soft power projection in East Asia poses several problems and potential. One of the most difficult issues is negotiating cultural and language variations, which can impede successful communication and engagement with global audiences. East Asian nations must overcome cultural subtleties and linguistic hurdles to ensure that their digital diplomacy initiatives resonate with varied global audiences. (Choe, 2019).

Technological limitations also provide problems for digital diplomacy in East Asia, particularly in nations with low internet access and digital literacy rates. Rural and underprivileged groups may have restricted access to social media platforms, reducing the scope and impact of digital diplomacy projects. Furthermore, official censorship and monitoring measures in some East Asian nations can limit freedom of expression and impede the spread of diplomatic messages on social media. (Lee, 2018).

Despite these obstacles, there are several chances to strengthen digital diplomacy activities in East Asia. The region's dynamic digital ecosystem, marked by high internet

penetration rates and extensive smartphone use, provides new potential for governments to interact with various audiences in real time. East Asian nations may better impact worldwide views and amplify their voices on the global arena by utilising innovative technology and digital platforms. (Southeast Asia Research Center, 2022).

In today's international relations scene, digital diplomacy is critical for moulding public impressions and attitudes toward East Asian countries. East Asian governments may boost their soft power, promote cultural exchanges, and develop diplomatic connections with other countries by properly leveraging social media platforms and digital technology. However, overcoming the obstacles of cultural and language disparities, technology limitations, and government control necessitates strategic adaptation and creativity. Moving forward, East Asian countries must seize the potential provided by digital diplomacy while resolving the inherent constraints in order to maximise their global influence and effect.

7. Conclusion

Over the last decade, digital diplomacy and social media platforms have been increasingly used to project soft power, notably in East Asia. This conclusion seeks to combine the important results and ideas from study on exploiting social media platforms for soft power projection in East Asia from 2015 to 2025. It will investigate the implications of digital diplomacy for East Asian countries, analyse the problems and potential connected with this strategy, and provide directions for further study in this area.

The research on digital diplomacy and soft power projection in East Asia reveals some important consequences for the area. To begin, the growing dependence on social media platforms for diplomatic interaction represents a fundamental shift in how countries conduct diplomacy and display their worldwide influence. East Asian countries, such as China, Japan, and South Korea, understand the value of digital diplomacy in strengthening their soft power and changing foreign opinions.

Second, the effective adoption of digital diplomacy techniques in East Asia has allowed these governments to raise their voices on a global scale and communicate with various audiences in real time. East Asian governments have used social media platforms such as Twitter, Facebook, and WeChat to communicate their narratives, promote their cultural heritage, and highlight their successes to the rest of the globe.

Furthermore, digital diplomacy has increased openness and accessibility in diplomatic activities, allowing individuals to play a more active role in international relations and changing public opinion on important topics. The interactive nature of social media platforms enables direct involvement between governments, diplomats, and the general public, resulting in increased openness and accountability in diplomatic procedures.

While digital diplomacy provides various potential for East Asian countries to strengthen their soft power, it also poses a number of obstacles that must be handled. One such difficulty is the possibility of misinformation and disinformation operations, which can weaken the legitimacy and efficacy of diplomatic initiatives. Governments must develop effective methods to combat disinformation and promote fact-based narratives on social media platforms.

Furthermore, the fast expansion of digital technology and the dynamic character of social media platforms necessitate ongoing adaptation and creativity in diplomatic initiatives. East Asian countries must keep current on developing trends in digital diplomacy and invest in the development of digital literacy skills among diplomats and government personnel.

Despite these limitations, digital diplomacy provides enormous opportunity for East Asian countries to increase their influence and establish diplomatic connections with other countries. The capacity to instantly connect with a global audience and engage in real-time discourse provides East Asian countries with unparalleled opportunity to shape world views and advance their strategic goals.

Looking ahead, there are various areas of future research in digital diplomacy and soft power projection in East Asia. One topic of investigation is the influence of social media on regional diplomatic relations, specifically the role of digital platforms in developing regional collaboration and tackling transnational concerns.

Furthermore, future study might look at the effectiveness of digital diplomacy tactics in reaching specific policy goals, such as boosting cultural exchanges, developing economic cooperation, or addressing geopolitical problems. Scholars may give vital insights into the effectiveness of digital diplomacy in accomplishing diplomatic objectives by undertaking thorough empirical research and case analyses.

Furthermore, there is a need for study on the ethical aspects of digital diplomacy, such as privacy, security, and human rights. As governments increasingly rely on digital technology to conduct diplomatic affairs, it is critical to assess the ethical implications of these activities and ensure that they are consistent with democratic norms and principles.

The study on using social media platforms to project soft power in East Asia from 2015 to 2025 emphasises digital diplomacy's revolutionary influence on regional international relations. East Asian countries have embraced digital diplomacy as a strategic instrument for increasing influence and altering global opinions. While digital diplomacy provides several potentials for East Asian countries to strengthen their soft power, it also introduces new obstacles that must be handled.

Moving forward, East Asian countries must continue to invest in digital diplomacy capabilities, adapt to the changing environment of social media, and handle the complex obstacles presented by digital technology. This allows East Asian countries to improve their diplomatic effectiveness, develop their worldwide reputation, and contribute to greater regional peace and prosperity.

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Embryonic World Order: Implications for Pakistan's Foreign Policy, Geopolitical Agendas and Foreign Affairs

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Abstract

The paper is a systematic review, based on secondary research outcomes and highlights the realism perspective which is of significant importance in understanding the post 9/11 emerging world order, realignments and implications for Pakistan, a thorough discussion has been made on by considering various aspects of the changing world order after 9/11. Based on the geopolitical state of Pakistan, it always has to stand the test of time and other external factors. This study has made a contribution by compiling and summarizing the important findings regarding the geo-economics, geopolitics and other aspects of Pakistan's foreign policy. The important concepts of world order, incident of 9/11 and impact on the foreign policy of Pakistan has been discussed. The research determines to serve objectives such as the Post 9/11 Emerging World Order, Realignments and Implications for Pakistan, the association of Pakistan's present political and economic condition with relation to international orders and capture the current picture of the Pakistan's emerging foreign policy and condition of international relations. The findings of the research illustrate how the incident of 9/11 has drastically changed the world economy, particularly of Pakistan. Since then, Pakistan has to bear a huge cost being a Muslim country and an ally to United States. Further the challenges and opportunities have been discussed with association to the present foreign policy realignments.

Key Words: World Order, Pakistan, China, India, United States, Global Politics, Foreign Policy, Peace and Security

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1. Introduction

U.S. presence in Afghanistan since 9/11 to combat the Taliban, the 2005 US-India strategic partnership and the Indo-Afghanistan strategic partnership, posed a challenge to the Pakistan-Afghanistan-India relationship. The Northern Alliance strengthened its ties with the U.S. and India at the expense of Pakistan (Inayat, 2013, 79). Following 9/11, Pakistan became the United States' frontline ally in the battle against terrorism in Afghanistan as a non-NATO supporter. When the U.S. regularly violated Pakistan's sovereignty through drone attacks and covert operations, it presented Pakistan as the bad guy, accusing it of being part of the terrorism rather than the solution, and enhancing India's regional prominence through the US-India strategic relationship. Pakistan's foreign policy, which had been neutral and non-aligned without any ideological choice in the early years after independence, was quickly pushed by the stark reality of dependency on the U.S. for security, economic, and political reasons. With such a strategic location in South Asia, major challenges to Pakistan's survival as a nation-state arose from the subcontinent's politics, in which Pakistan's disputes and confrontations with India and Afghanistan, particularly the conflict over Kashmir and the water division dispute in the Indus basin, were no doubt central in shaping Pakistan's foreign policy (Kundi, 2009, 197-198).

In geopolitical and regional terms, the U.S. policy of incorporating littoral states of the Indian Ocean and Asia-Pacific into a cooperative strategic partnership architecture, such as Japan, South Korea, the Philippines, India, Vietnam, Singapore, Australia, and Indonesia, is bolstering its strategic outreach while on the other hand, provoking Chinese reservations about the former's policy toward the latter. Although the U.S. sought to emphasize multiple times that this cooperation framework was not intended to be unfriendly to China, it was being implemented in light of the present political and economic situation to assist preserve the value-based alliance. According to Kurt M. Campbell, a former Assistant Secretary of State who worked with President Obama on Asia strategy, relations between the U.S. and China have "gone from being generally excellent at the strategic level among the large powers to very challenging" (Khan, 2015).

The 9/11 attacks wreaked havoc on the U.S. economy as well as those of its allies. The repercussions have changed the relationship between the two countries (Levi and Wall, 2004). Following the 9/11 attacks, U.S. officials quickly identified Osama bin Laden and his Al-Qaeda organization to be the only perpetrators, ruling out any other options. Following the terrorist attacks of 9/11, the world community began to regard terrorism as a global security problem. The disaster affected not just American foreign policy, but also the global power and security system. These terrorist attacks marked the beginning of a new era in the U.S. and the rest of the globe. The US launched a military operation in Afghanistan against the Taliban and al-Qaeda on October 7, 2001. The ostensible

purpose of the strike was to catch Osama bin Laden. Within a few months of the invasion, the International Security Assistance Force had taken key cities in Afghanistan (Afzal, Iqbal and Inayay, 2012, 194).

Pakistan's relations with the U.S. and China extend back to the Cold War era and have altered as a result of major geopolitical events. As a consequence of post-9/11 dynamic global political developments and the increasing Indo-US strategic partnership, Pakistan has been compelled to seek strategic collaboration with China in order to maintain the balance of power in South Asia (Maqsood, 2021, 50). Pakistan was an important Cold War actor, and its grand culmination in Afghanistan (1979–88) was crucial. Years after the defeated Soviet army departed Afghanistan and the enormous American CIA operational unit was disassembled from Islamabad, the spectra of that conflict and its numerous manifestations still haunts Pakistan. Events in Afghanistan have a huge influence on Pakistan's security, whether they are caused by natural calamities such as drought or the Taliban government's radical ideas (Shah, 2001). Pakistan faced a new type of terrorism as a result of a shift in its foreign policy. Suicide bombers and the indiscriminate targeting of foreigners were the first manifestations. International pressure could never force Pakistan to openly halt the operations of Jihadi/fundamentalist organizations (Kundi and Faiqa, 2005, 3-6).

Since the conclusion of the Cold War, Pakistan has faced a number of challenges. The dimensions of almost all the Pakistan's international relations are being assessed, and historical alliances and interconnections are being examined (Mazhar & Goraya, 2013, 96-97). Pakistan played a mixed role in gaining and maintaining operational access to Afghanistan after 2001. While diplomatic and economic instruments were helpful in persuading Pakistan to support and providing operational access to Afghanistan, they were insufficient in gaining access to areas Pakistan considered of vital interests, depriving the U.S. of its overall strategic goal of eliminating terrorist organizations that had come to rely on Pakistan as a safe haven (Rossbach, 2021).

In the aftermath of 9/11, Pakistan had to deal with a lot of problems while staying true to national goals. During the first decade of the twentieth century, Pakistan's international asylum relationship with the U.S. remained strong. Pakistan, on the other hand, began to assess its foreign policy alternatives as time went on, seeking new ways to engage. Pakistan's foreign policy has taken on a new color as a result of its major strategy toward China in particular, and the Golden Ring for Security in general. Pakistan, China, Iran, Turkey, and Russia formed the Golden Ring, a new powerful and influential group, since 2016.

In order to protect its national interests, Pakistan selected new pathways to create a balance of power in South Asia and maintain a multi-pronged foreign policy front. General Pervez Musharraf, Pakistan's president (1999-2018), could not deny the U.S. plea for assistance in the battle against terrorism after the 9/11 attacks.

Pakistan and China are committed to collaborating to safeguard their sovereignty and expand their economies. The geostrategic significance of China and Pakistan's strategic partnership in the construction of Gwadar Port and the formation of the China-Pakistan Economic Corridor cannot be overstated. The CPEC has grown in importance as a result of Gwadar Port's deep-water port, geo-strategic location, and the reliance of landlocked Central Asian nations and China's Xinjiang province on access to the sea for their exports. Through Gwadar, Pakistan may promote economic growth and strengthen strategic connections with other nations.

The participation of Russia in the CPEC, which would provide long-term investment, security, and stability to the region, should be made easier. Lines of communication connecting Pakistan and Russia via Central Asian countries might be another game-changer in the region, since they will boost regional commerce (Mumtaz, Ramzan, and Gul, 2018, 8).

Pakistan's prosperity would impact not just the fate of their region, but also global stability. Pakistan has developed into a prominent actor with a distinct identity. All of its major interests must now be safeguarded and preserved at all costs. Pakistan should demonstrate and conduct a principled foreign policy in order to promote its national interests. Pakistan, as an ideology state, seeks to improve connections with Islamic countries while also campaigning for the rights of underdeveloped countries in general and Muslim countries in particular.

2. Theoretical Framework

To better understand the dynamics of the ever-changing Pakistan-U.S ties, the realism method was used to investigate major events that happened after 2000 that affected Pakistan's foreign affairs vis-à-vis the U.S. The major realism kinds of classical and structural realism have been combined to prove Pakistan's behavior. The most well-known and generally believed theory of international relations is realism. Realism, often known as political realism, is an approach to international politics that emphasizes the situation's challenging and conflictual aspects.

Realists argue that states are the dominating force in the global arena because they are concerned about their stability, operate in pursuit of their strategic interests, and compete for domination. The greatest drawback of realists' growing concentration on power and self-interest is their skepticism of the value of moral norms in inter-state interactions (Karpowicz, 2017, 3-4). In an anarchic world, realism holds that global politics is a heated competition among self-interested countries for strength, fame, and social position (Zaidi & Ahmad, 2021, 3). After 9/11 incident, the realism approach would lead to a better understanding of the Emerging World Order, Adjustments, and Consequences for Pakistan. One of the approaches used to govern the international political process is foreign policy. It may be described as the efforts made by governments to maintain international relationships. Realism is a simple notion that states that every

country wants to increase its power, and that only countries with more strength in the international system can develop.

According to the reasoning, any nation's primary purpose is to defend itself while accumulating power. If it is possible to attain national goals by lying and violence, the state will not follow moral principles. Every state, on the other hand, is self-contained and unaffected by intrinsic society, which might influence interstate relations. They can only start dating if they both agree. A realist thinks that in an anarchic society, state authority is the only way to protect and survive because it is the only way to defend and survive. Because they place such a high value on chaos and power, realists have a negative opinion of international law and institutions.

3. Global Politics: Post 9/11 World Order

The events of 9/11, altered the dynamics of the globe politics. It ushered in a new age of global securitization and international security politics became the primary source of all-important policies in the global environment. Pakistan's post-9/11 alliance with the US, marked the beginning of a turbulent time in the country's political history. Pakistan became a battleground in the US war on terror, and paid a high price in terms of human and material loss. The reaction to 9/11 demonstrates the implementation gap, underlining economists' arguments for monetary policy over fiscal policy. The day after the attacks, monetary policy changes began, and the most of them were completed within a week. Economic scenario showed that 9/11 negatively influenced the fundamentals of supply and demand in energy markets having minimal long-term impact. Because there was no disruption in oil market fundamentals or large-scale economic consequences, there was no room for fresh government intervention to restore energy market stability. While the majority of the short-term financial implications of 9/11 were transient, there were some medium- and long-term consequences. The most evident medium-term impact is that people and organizations all over the world are looking for better security, yet security comes at a cost. Insurance premiums, in particular, have increased (Makinen, 2002, 7-9).

A hallmark of modern international politics is the emergence of an increasingly complex web of interconnectivity. While competing/counter-competing with one another, India and China are also cooperating with each other but the simmering tensions between India and China carry the possibility of escalation, which could be disastrous given that both sides are nuclear powers. China is one of India's primary commercial partners, there will be economic consequences because the trade of both states rely on the same maritime channels. It's possible that their mutual desire for marine routes may compel them to forge an alliance that may be indirectly hostile to the U.S. (Howell & Lind, 2009).

American and other foreign companies, legislators, and the media criticized changes in visa requirements for the sharp drop in travel to the U.S that occurred in the aftermath of the attacks (Neiman, & Swagel, 2009). The declaration of a global war on terror

heightened national and international security concerns. Anti-terrorist legislation, policies, and practices have been enacted by governments all over the world in response to the perceived danger of terrorism (Stares, Jia, Tocci, Jaishankar and Kortunov, 2020). Many alliances are presently being formed among governments throughout the world in order to improve specific countries' geopolitical and geo-economic positions e.g.

- North American Aerospace Defense Command (NORAD)
- Caribbean Community (CARICOM)
- Forum for the Latin American Progress and Development (PROSUR)
- Russia-Syria-Iran-Iraq Coalition (RSII)
- Treaty of Mutual Cooperation and Security between the United States and Japan
- Reciprocal Access Agreement (RAA)
- Sino-North Korean Mutual Aid and Cooperation Friendship Treaty
- Shanghai Cooperation Organization (SCO)
- Treaty of Good-Neighborliness and Friendly Cooperation between the People's Republic of China and the Russian Federation (FCT)

The purpose of these partnerships is to secure economic, political, and geographical frontiers. The alliances have enabled the nations to reap the benefits of geo-economics cooperation. On the other side, these ties have a substantial impact on allied nations' foreign policy shifts and realignments. As a result, Pakistan's foreign policy and international relations with the rest of the world must change. Following the 9/11, China's global exposure has expanded, and it is now seen as a world power based on its alliances. China, by focusing on its foreign policy frameworks, has improved its international connections. It has created agreements with Russia to protect international links. It has also reached an agreement with North Korea for the mutual defense of the two nations. As a result of developments in global foreign policy reforms, China has formed official and informal alliances. Despite some of its real and perceived hard power qualities, the U.S has very little influence on global outcomes if power is defined as the ability to learn and shape political events (Camroux & Okfen, 2004).

Although the interests of China and Pakistan appear to be aligned for the time being, the weight of Pakistan's unsustainable debt has increased Chinese presence in Pakistan, and intrusions into Pakistani internal affairs are all likely to cause discontent, potentially leading to a divergence of interests. Given the threat that China's BRI poses to U.S. interests today and in the twenty-first century, it appears that China's BRI does not pose the strategic threat that it is frequently depicted as in the short term, but could pose a significant threat in the long run if China is able to complete its vision. As a result of the new world order, significant changes in international relations occurred. A shift in conflict lines from the horizontal to the vertical realm, between governments and social actors, underpins the new global order (Kakihara, 2003, 5-6).

Despite the apparent grandeur of massive foreign aid or investments, great power interference or control over smaller states has the potential to generate resentment and

resistance, limiting great power actors' influence and causing more liabilities than benefits, especially when those states' perceptions of vital national interests differ. Although China may be able to get access to certain regions using the diplomatic and economic instruments, the financial costs may be prohibitive. Debt-stricken countries such as Pakistan, which require interminable financial bailouts, may jeopardize not just China's ambition, but also the Chinese state's financial solvency.

4. Impact on Peace and Security of Pakistan

India and Pakistan are on divergent strategic tracks, trends are expected to expand the gap between misperceptions and security perspectives, posing a serious threat to the region's strategic dynamics. In recent years, regionalism and regional security have grown increasingly essential.

Pakistan and India have been viewed as rivals since their establishment. The Kashmir issue principal source of contention; the two countries have fought three major wars over it. Now, India has reservations about the CPEC route via Gilgit-Baltistan, which is part of the disputed Jammu and Kashmir state and is classified as Pakistan-occupied Kashmir. India is apprehensive that Pakistan may legalize Gilgit-Baltistan as a fifth province, allowing Pakistan to expand its control over Kashmir. India has voiced its opposition to this idea (Curtis, 2012, 255). India urged China to cancel the project and called it as unacceptable since it passed through a disputed part of Kashmir. India also had reservations about the Chinese laborers and engineers on the project. Chinese involvement was considered as a threat to India's security interests. China's growing influence in South Asia effectively fill the hole created by the US's unwillingness to invest in Pakistan. The U.S. has aided Pakistan militarily and financially in the past, but it has never been interested in constructing infrastructural development projects (Jaleel, Naureen and Mahesar, 2018, 223). The projected megaprojects would not only provide Pakistan with huge economic and commercial benefits, but will also give Pakistan tremendous geopolitical leverage over India. Indian territorial ambitions in Pakistan's northern territories would be deterred by China's presence. Pakistan's security and economic prosperity would both benefit from this.

Terrorism became a global issue after the 9/11 attacks. Terrorism and extremism have reached an all-time high in Pakistan after 9/11, and the security situation has been awful. Many of people died and thousands were wounded as a result of terrorist assaults. The situation was dire across the country, but the surge in violence had a particularly negative impact in FATA and KPK (Ahmed, Nov 22, 2016). In that situation, Pakistan required national collaboration and solidarity. Pakistan's security situation was deteriorating on a daily basis, necessitating immediate action to address the security issues.

Pakistan's financial division estimated that its economy had incurred a 2.1 trillion-dollar cost as a result of its active participation in the war on terror. Foreign direct investment was inhibited, and export and industrial output were hurt, due to a lack of security. According to the State Bank of Pakistan, FDI declined by 54.6 percent in 2010, resulting in a loss of 1.18 billion dollars, due to internal security concerns, an unpredictable political situation, and terrorist fears. The government was unable to negotiate an agreement with foreign parties due to the scenario. The stock market had

fallen as the country's security situation had deteriorated, with suicide attacks and unsafe government security practices instilling fear and confusion among the public.

The U.S. foreign policy suggested a fundamental shift in U.S. international relations after 9/11. The economies of the United States' allies were mostly unaffected by those events. The attack's repercussions, on the other hand, resulted in a new world order. Adversity struck Europe, Asia, and the Middle East in particular, international links shifted dramatically, and foreign relations were badly affected. Anti-terrorism legislation and regulations became a significant part of international relations (Kakihara, 2003, 7-9). Western world united as one voice to combat terrorists across the world. Pakistan's President, General Pervez Musharraf, had no choice but to assess his options in such a predicament. Under the circumstances, he made the best decision he could. Since 9/11, Pakistan's foreign policy objectives have taken a number of detours. During the 2001 invasion of Afghanistan, Pakistan was an ardent backer of U.S. Pakistan had no option but to pursue its interests in conformity with the U.S. grand plan for South Asia, according to the principles of rational choice theory. Pakistan's foreign policy decisions changed as regional and local variables changed (Ahmad & Hashmi, 202, 126-128).

The various alterations in the new global order have been uncovered. The threat of terrorism has escalated as a result of the perception developed after 9/11. Almost all the countries feel that terrorism can strike at any time when the U.S. is powerless to defend them. Terrorist threats were more visible, and governments sought to protect their weapons in order to prevent widespread tragedy.

Changes in foreign policy are prioritizing tactics to deal with the potential for severe damage as a result of terrorist activities, which is one of the most important revolutions in international relations. The U.S. has transitioned from being a superpower to just influencing other countries. China and Russia have begun to exert influence on the world through allies and international relations.

Furthermore, the importance of diplomatic and economic instruments was frequently eclipsed by larger geopolitical considerations that compelled the U.S. and Pakistan to align their interests. The U.S. used diplomacy and economics to influence Pakistani behavior when their vital interests were aligned; however, when their interest diverged, diplomatic and economic instruments proved largely ineffective.

As a result of prolonged hostility, dizziness, deformation, decelerating trade and production, stagnation in export, swaying stockholders, and a corresponding law and order situation, Pakistan unavoidably became mired in crisis. Pakistan has one of the most comprehensive threat assessments of any country in the world. China, an emerging economic giant; India, a state with vastly superior industrial resources and a much larger human base, as well as intense conflicts with Pakistan over a variety of issues, particularly the Kashmir issue; Iran and Afghanistan, never friendly and a source of internal tension and domestic instability; and the Arabian Sea, which serves as a gateway to Central Asian states through Gwadar Port. Furthermore, two of Pakistan's most populous provinces

have substantial ethnic and tribal ties across the Afghan border, while Jammu and Kashmir's status on the Indian side remains unresolved. Pakistan's domestic politics are still closely linked to the political relations of its neighbors (Akbar, 2011, 4-5).

5. Pakistan Strategic & Economic Relations with China

China and Pakistan's relationship has been an all-weather friendship because of its durability in the face of changing geopolitical situations. Beginning in the 1960s, both China and Pakistan fought massive wars against their neighboring rival India, which gave opportunities for further mutual cooperation. India says China's operational control of Gwadar encircles it. Despite the fact that Gwadar is barely 400 kilometers from the Strait of Hormuz, providing it a shorter way to the world's second largest oil customer, China, the other argument is that neither China nor India is powerful enough to make these claims realistic (Sumit, 2004, 117). In terms of the region's emerging strategic dynamics, the shift from traditional state behavior governed by the ethos of the Treaty of Westphalia to a post-Westphalia world in which states are increasingly subjected to a state of interdependencies shaped by economic openness, political imperatives for welfare maximization, and democratic political principles has a direct impact on India and Pakistan's foreign and security policies. This has had an impact on states' security requirements alone; security has evolved into a structurally conditioned social benefit. At the same time, this transformation in global structural politics has had an impact on India's and Pakistan's strategic orientations, national identities, instrumental preferences, and interaction preferences (Andrew, 2015, 54)

The China Pakistan Economic Corridor (CPEC) is a railroad, road, and fiber optics project that intends to connect Pakistan's undeveloped province of Baluchistan (Gwadar Port) with China's underdeveloped region of Xinjiang. Both China and Pakistan are investing heavily on the CPEC. China has surpassed the U.S. as the world's top oil importer as a burgeoning economic powerhouse. The CPEC is the shortest and safest route for oil imports. Furthermore, CPEC has helped to elevate China's western regions out of poverty. China has implemented initiatives that will boost the Chinese economy's profitability (Jaleel, Talha and Mahesar, 2018, 222-223).

The success of China's substantial investment depends on Pakistan's ability to maintain security and stability. It is Pakistan's responsibility to guarantee that this large Chinese investment is feasible and valuable in the long run. The CPEC may transform Pakistan into an energy transit corridor and regional commercial powerhouse by providing financial assistance for infrastructure development. In addition, this collaboration acts as a check on India's colonial ambitions in South Asia (Maqsood, 2021).

The CPEC project provides Pakistan with an opportunity to address its difficulties and enhance its population' living conditions. Pakistan's economy is in shambles, compounded by the war on terror and internal security concerns. Pakistan has only attracted a little amount of foreign investment. Furthermore, the country is coping with an energy crisis that is limiting its economic development. Baluchistan's least developed

area is projected to benefit the most from the effort. Pakistan is extremely important to the China. Beijing's Belt and Road program would be nearly impossible to implement without Pakistan. China's geopolitical goals require Pakistan's strategic position and access to the sea.

Chinese investments in Pakistan as part of the Belt and Road initiative will boost Pakistan's global trade value. Stronger marine transport linkages with Gulf States and Africa can also assist Pakistan in expanding its commercial ties. Pakistan will benefit from regional integration and a collaborative pursuit of sustainable development in a peaceful and stable environment. If Pakistan can create a functional and efficient train supply route to Turkey via Iran, for example, it will improve its access to the European market (Ozkizilcik, 18 Jan, 2022).

6. Pakistan's Diplomatic Relations with United States

Following 9/11, the U.S. reluctantly welcomed Pakistan into its bend to ease its occupation of Afghanistan, fight the longest war, and finally withdraw safely. Pakistan was coerced into joining the U.S. war on terror, which it fought tenaciously and produced the best results whilst also suffering the most and all of Pakistan's security forces' accomplishments infuriated both the U.S. and India. When the heavily fortified strongholds of Swat and South Waziristan were overrun in 2009, and all of FATA's tribal agencies, except North Waziristan, were recaptured in 2010, and the ISAF was forced to abandon its boots on the ground strategy in Afghanistan and announce a withdrawal plan due to the resurgence of the Afghan Taliban in Afghanistan, the befuddled Obama and Pentagon took their rage out on Pakistan in 2011.

The most recent hostile act against the so-called ally, which brought Pak-US relations to a halt, compelled Pakistan to respond defiantly. Throughout the war, the U.S. and its strategic partners conspired to derail Pakistan's nuclear program, while Pakistan considered each other allies and continued to do more, bleeding the country. Pakistan was critical to the success of Afghan peace talks that resulted in the historic Doha agreement, the launch of an intra-Afghan dialogue in September 2020, and the Taliban's failure to attack foreign military targets.

It played a historic role in evacuating and housing 10,000 people from Kabul, including US-NATO forces, US diplomats, IMF-World Bank officials, and Afghan nationals. Pakistan's sacrifices and efforts to please the U.S. were scorned and blamed for the war's catastrophic conclusion. In comparison, India, which failed the U.S. on all fronts, was kept in its tight embrace and handsomely rewarded simply because it offered profitable economic and IT markets, purchased large consignments of armaments from the U.S. and Israel and contributed to the game of intrigue and deception. Now that all of its troops have returned home, the U.S. wants to avenge from Taliban, who are allegedly supported by Pakistan.

The entire blame for the U.S. chaotic exit is pinned on Pakistan, a convenient scapegoat. Pakistan's diplomatic goals must be based on resolving the China-U.S. conflict

and managing adversarial relations with India and Afghanistan. Even in the face of ongoing geopolitical competition between major powers, Pakistan's diplomatic efforts must aim to secure its national interests. However, Pakistan must maintain peace, protect human rights, increase economic cooperation, promote democratic values, and strengthen society in order to combat terrorism and religiously motivated extremism. In this way, Pakistan will be able to reestablish its credibility, improve its image abroad, and secure its fair share of progress in Asia, which is poised to become the world's new power center in the twenty-first century.

Other hostile acts include the IMF's disturbing dictations, pressuring Pakistan to further devalue its currency and raise taxes on petroleum, gas, and electricity, the FATF's reluctance to whiten Pakistan, and India's recent threat of launching a surgical strike, as well as an Indian submarine sneaking into Pakistan's waters and being chased out. The U.S. encourages India's bellicosity. Under the circumstances, India may be the U.S. preferred South Asian partner (Karim, 2022).

Pakistan received significant military and economic assistance, allowing it to strengthen its security against Indian hostilities and survive in a harsh security environment characterized by conflicts with India over Kashmir and tensions with Afghanistan over the Durand line. Nonetheless, as Pakistan drew closer to China during the 1965 war, this warmth in its relations with the U.S. began to fade. Pakistan's firm belief in the axiom "my neighbor's neighbor is my friend" enabled it to gain diplomatic and material support from India's rival China.

The process of change and continuity in Pakistan's foreign policy in the mid-twentieth century can be studied from two angles: security dilemma and geopolitics. Security has remained a dominant factor in the formulation of a country's foreign policy. Pakistan inherited a hostile neighbor that was both bigger and stronger in terms of economic stability, military power, size, and geography since its independence in 1947.

Thus, Pakistan joined U.S. led military alliances and became a member of the Southeast Asia Treaty Organization (SEATO) and Central Treaty Organization (CENTO) after adhering to the Eisenhower doctrine, which stipulated U.S. military and diplomatic support in the event of communist aggression against a country (Mahesar, April 23, 2022). The international community's warm attitude toward India's intentions to achieve regional hegemony further justified Pakistan's nuclear weapons development, which aimed to create nuclear deterrence. During the cold war (1979-1989), the U.S. fought a war against the Soviet Union in Afghanistan, with Pakistan serving as a key ally. The country received massive American economic and military assistance. During this time, the U.S. supported an anti-Soviet war in Afghanistan, allowing Pakistan to continue its nuclear program.

Following the end of the Cold War, the U.S. imposed sanctions and, under the Pressler Amendment, cut off aid to Pakistan. Pakistani officials continue to insist in international and regional forums, as well as bilateral meetings with representatives of

the U.S. and other key Western states, that the Taliban takeover has not destabilized Afghanistan. The nightmare scenarios feared after the Taliban takeover have not come to pass because there has been no widespread violence or violation of human rights and the security situation has vastly improved. Given the changing security dimensions of the region, Pakistan's geo-strategic significance, increasing strategic depth through economic connectivity, and promising economic potential are important determinants of the rising national power's ability to influence the outcome of international diplomacy in its favor.

India is a key prospective ally for the U.S. to counterbalance China. India has the world's second-largest population, a rapidly developing economy, and a strategic location that permits U.S to extend its containment strategy to the Indo-Pacific. For years, American representatives have maintained that India will have to choose sides and has predicted that India will support the U.S. While India may strive to avoid making such decisions, structural realities would force it to. India will side with the U.S., just as Australia was driven to join AUKUS by the international system (Ward and Mcleary, 15 September, 2021). Border confrontations between China and India in 2020 were simply a taste of the international system's overwhelming strength.

7. Pakistan's Foreign Policy: Changes over the Years

Foreign policy refers to a country's pattern of interactions with the rest of the world in order to advance its national interests, and it is a constant in international politics. The outside world is made up of state and non-state actors such as Non-Governmental Organizations and International Governmental Organizations. Foreign policy is defined as a state's actions toward the external environment and the conditions under which international acts are generated (Younas, 2003, 69). The relationship between national goals and the resources available to achieve them is a recurring theme in statecraft. Pakistan has always aligned its foreign policy with Western goals. Despite Pakistan's foreign policy favoring foreign interests, the west has backed Pakistan on both instances (Kundi and Faiqa, 2005, 1). In conclusion, external elements and national determinants (domestic elements) of foreign policy, have a significant impact on the design and orientation of a state's foreign policy (Gimba and Ibrahim, 2018, 122-123)

Pakistan's foreign policy has been characterized by self-denial in the past. External factors, particularly the U.S. are blamed for defining Pakistan's foreign policy, although several local elements also provide challenges. As Pakistan is an ideological country, ideology occupies a special place in its foreign policy and has always been a top priority (Akbar, 2011, 1). Pakistan's foreign policy is hampered not just by its commitments in Kashmir and limits in Afghanistan, but also by its unclear regional position, as seen by the country's shaky relations with Iran. Pakistan's connections with China, were not as strong in the 1990s as they had been in the past. China has made it clear that Pakistan must put the Kashmir issue on hold and peacefully live with India. China has made significant progress in its relations with India. Pakistan's stance of steadfast support for Muslim countries and causes has been badly damaged.

Pakistan's anti-Israel approach appears to have lost credibility, given that the principal antagonists, Palestinians and Israelis, have been communicating directly to each other since the commencement of the 1993 Oslo peace process. Many Arab countries have reached an agreement with Israel, leaving Pakistan trying to justify its policy. In actuality, numerous Middle Eastern countries that Pakistan has aided in the past, such as Iran, Jordan, and Turkey, have recently shown signs of disinterest (Shah, 2010).

After 9/11, Pakistan's foreign policy took a turn, discarding a number of values that had been in place for decades. It was a fundamental change in its Afghan strategy from partners to opponents. The Talibanization of Afghanistan, which began with Pakistan's active aid after the 9/11 attacks, was rapidly rejected under the core-periphery relationship. Pakistan has expressed its support for the U.S strong military presence in Afghanistan. Pakistan's foreign policy toward India had also shifted significantly after 9/11. The reactivation of abandoned motorways, the normalization of cross-border trade, the relaxing of visa restrictions, and the signing of a slew of protocols were all evidence of a reformed Pakistani foreign policy (Khan, 2005, 48-49).

Pakistan aided US efforts in the area at the expense of its own core interests, but the US responded by adopting double standards and abandoning its crisis partner. From the beginning of the alliance, when Liaquat Ali Khan abandoned a planned visit to Moscow in favor of a trip to Washington, DC, until its 2001 U-turn on Afghanistan, Pakistan has backed all accords and directions with sincerity and devotion. Pakistan joined the SEATO and CENTO coalitions, which were cobbled together by the US in a fit of Pactomania. Around 1959, Pakistan gave American intelligence and monitoring facilities in the Peshawar area. As a result of this, the U-2 Plane incident happened, pitting Pakistan against the Soviet Union. A diplomatic row broke out between two countries (Sunawar and Coutto, 2015, 5)

As a result of the U-2 plane incident, Pakistan's security was jeopardized. The Russians shot down the plane and the pilot was detained on Russian soil. As the jet flew from Pakistani land from facilities provided to the U.S. for surveillance and espionage objectives, Soviet Premier Nikita Khrushchev warned Pakistan of the implications. When the U.S. was denied a contract extension for another decade, the base was deactivated in 1968. The US-Pakistan relationship is notable for its backing for huge military regimes and managed democracies in Pakistan, rather than a true representative government (Sattar, 2009, 49-50)

Internal policies based on tolerance and moderation, as well as drastic changes, must be enacted to resist extremism. As a fundamental planning technique to foster societal peace, Pakistan incorporated extremism and terrorist concerns into policies and development programs.

Many countries in the region accepted much stiffer combating terrorism stances as a result of wars, while others saw them as political and geopolitical opportunities to reshape domestic security policy and realign themselves with the U.S. and its allies.

Others, however, saw the attacks as an opportunity to increase violence and oppression of minority communities, particularly Muslims. At the same time, the fall of Kabul, an ignominious defeat in the global war on terror that began 20 years ago, demonstrates the sharp limits of military power in the face of deep ethnic divisions and inequity (The Diplomat, 13 Sep, 2021).

The U.S. and Pakistan must define a mutually beneficial and long-term relationship because, despite significant strategic adjustments, the global community has never been more mutually dependent and immersive. Both countries must recognize that extremes can and should be avoided, and that the middle ground on almost all issues should be pursued.

Pakistan's threat perceptions have grown as India's military strength and conventional weaponry have improved. India's testing of unconventional weapons in 1974 heightened Pakistan's sense of vulnerability. The Indian nuclear explosion increased threat perception and provided the impetus for the development of nuclear weapons. Furthermore, the Pakistani government must revitalize its relationship with the U.S through various channels of digital and non-digital diplomacy, as well as carefully manage the situation created by the foreign conspiracy-related narrative of regime change. Pakistan's security and foreign policymakers first focused on the international strategic environment. Since 9/11, Pakistan has concentrated on regional security because the regional security climate primarily affects Pakistan. The stability of Afghanistan, India's regional hegemony plans, Pakistan-Iran relations, and the CPEC is currently the primary geostrategic problems influencing Pakistan's foreign policy.

8. A Rule Based Order

Rule based order signifies the supremacy of U.S. in cultural values, political ideology and economic system. After World War-II, U.S. and its allies propagated the idea that the non-western allies should abide by the rule-based liberal order. The declining dominance of U.S. has raised questions over its global hegemony. It has been facing increasing economic challenges as a result of domestic stagnation, whereas the GDP of Asian countries has been steadily increasing.

Moreover, China's upward economic expansion over the last two decades has posed a threat to the economic and political management in international arena, U.S. danger assessments are at all-time high, U.S. has been devising strategies to counter China by whatever means necessary. The AUKUS (Australia, United Kingdom, and the U.S) security collaboration has sent shockwaves throughout Asia and Europe thus destabilizing both regions. Moreover, Indo-Pacific region is seen as a geopolitical clash between the U.S. and China, the AUKUS countries have praised their efforts to assist peace and stability in the region by sending nuclear-powered submarines to Australia. The agreement might trigger an arms race, putting the region's security in jeopardy. In the South China Sea, it has also conquered islands and developed port facilities (Makwana, April 17, 2022).

China has developed significantly in technology, acquiring Anti-Access and Area-Denial capabilities, as well as hypersonic capabilities. This has significantly altered the nature of U.S-China combat. It is important to understand that U.S. is a maritime power and its prowess depends on the seas. Every year, commodities worth of billions of dollars, are carried from U.S. ports. As international trade expands, the seas have become increasingly important to U.S.

Furthermore, technological advancement and its usage under the ocean bed is creating a space for future problems in territorial seas. The United Nations Convention on the Law of the Sea (UNCLOS) is the sole global legal framework that controls the law of the seas, and the U.S. is the only government that has signed, but not yet approved it. Similarly, the U.S. believes that relying on UNCLOS arrangements and expecting that other nations follow the same pattern will ensure its ability to traverse unhindered on missions and patrols.

Conservative and liberal presidential administrations have relied on Reagan's precedent to legitimate and direct the Freedom of Navigation Program (FONOP) in sensitive areas such as the South and East China Seas. The U.S. has been projecting strength in the Indo-Pacific through the FONOP while maintaining the protection of its allies (Makwana, April 17, 2022). The growing dominance of China and Russia has caused an alarming situation in the West, particularly in the US. Since the Covid-19 pandemic hit the world, affecting the world's greatest economies and imposing lockdowns, the U.S. has been working hard to use all of its resources, allies, and even NATO to put pressure on both to ensure its relevance in the ever-changing international order.

9. Pakistan's Foreign Policy Implications and Realignments

After 9/11, the manner of collaboration created between Pakistan and the U.S. was obscured by unequal relationship status, resulting in major ramifications for Pakistan. Pakistan suffered greatly on political and strategic fronts as a result of the changing geopolitical circumstances following 9/11, which were caused by U.S.-led military operations in Afghanistan. The magnitude of the implications, which were primarily driven by U.S. security politics, put a huge dent in the country's overall sustainable development, as an already slowly developing country was forced to face additional military and strategic compulsions as a result of cooperating with the U.S. in the war on terror.

Despite being allies, there were numerous policy differences between the U.S. and Pakistan, ranging from the U.S's drone operations program in Pakistan, to the strategic partnership. This imposed a new layer of consequences on Pakistan's governmental system, encompassing economic, military, political, and social consequences.

Pakistan has changed its foreign policy from geopolitics to geo-economics. Geopolitical competition among major powers has threatened international peace and made diplomacy unpredictable. Geo-economics refers to the use of geography as a tool for maximizing economic well-being. Concentration on geo-economics would help minimize

the consequences of escalating U.S.-China competition. While Pakistan believes that geo-economics would maximize its self-interest, the international system may hinder it; Pakistan cannot ignore geopolitics.

Pakistan is in a strategic location, surrounded by Afghanistan, Iran, China, and India, which presents both problems and possibilities. Pakistan's policy reversal after 9/11 was purely pragmatic. Pakistan was obliged to assist the U.S. in dislodging the hardline Islamist administration that Pakistan's military establishment saw as crucial to the country's security after spending the previous seven years assisting the Taliban. The U.S. considered Pakistan's large store of Afghan intelligence vital to launching military action against the Taliban and Al Qaeda.

However, the reversal was not simple. The threat of U.S. annihilation if Pakistan did not comply was a powerful argument in favor of the policy shift. The U.S. has previously been promised logistical help and access to all of India's military facilities. India had approved its airbase in Farkhor, Tajikistan, on the Afghan border, for American soldiers to use. Fears of an American-Indian alliance leading to Pakistan's designation as a terrorist state swung the decision. Ironies abound in the US-Pakistan relationship after 9/11. While U.S. and Pakistan's coordination against Al Qaeda was tremendously efficient, that understanding was lacking when it came to taking action against Taliban commanders in Pakistan's border regions.

The Taliban had evolved into a powerful resistance movement capable of fighting the invading army within a few years. Pakistan's security worries were genuine in certain ways, but the fear of encirclement bordered on psychosis. It also led to Pakistan's continued support for Afghan Taliban elements such as the Haqqani Network, which it saw as a crucial instrument for opposing Indian influence, even if it meant jeopardizing the country's relationship with the U.S. The deterioration of US-Pak ties had a significant impact on America's combat efforts in Afghanistan.

Since the start of the CPEC, Pakistan's foreign policy has shifted significantly. The CPEC's goals are consistent with Pakistan's foreign policy principles, which include developing friendly relations with all countries, particularly immediate neighbors; safeguarding national security and geostrategic interests, including Kashmir; and ensuring the best possible use of national resources for regional and international cooperation.

A series of occurrences in 2011 had strained an already strained relationship. Pakistan's biggest commercial partner is the U.S. Pakistan's largest export market and a key source of foreign remittances is in the U.S. Pakistan would undoubtedly require U.S. assistance to attain economic stability. In addition, the country has a burgeoning technological industry that might benefit from U.S. assistance. Trade, security, and human rights have all been vexing issues in China-U.S. ties since the end of the Cold War.

10. Challenges & Opportunities Shaping Pakistan's Foreign Policy and Relations

The opportunities and challenges of the evolving global order necessitate a flexible and innovative approach as well as well-articulated statesmanship.

10.1. Challenges

Pakistan has faced an existential danger from India since its independence. However, Pakistan's strategic situation has gotten more difficult since 9/11. Pakistan has been fighting terrorism for the past sixteen years. Pakistan's strategic environment has improved as a result of successful military campaigns against terrorists and the signing of the CPEC agreement with China. India will continue to pose a huge national security danger to Pakistan because it is destabilizing the country by using Afghan soil and isolating Pakistan.

Pakistan's relations with China will continue to take precedence. While long-standing strategic connections have gained a strong economic dimension, relations must be maintained by continued high-level interaction and consultation. CPEC is on pace, but concerns in the second phase must be addressed. They include making complicated bureaucratic approval procedures for investors easier to understand, eliminating the issue of deferred payments and encouraging more business-to-business interaction (IPRI, 2022). Pakistan is struggling to strike a balance between its connections with the Afghan Taliban and the U.S. Both claim that Pakistan is supporting the opposing side. Pakistan, they claim, battens down on them without returning anything substantive. Both believe they are the victims of Pakistan's deception. Surprisingly, both are on a revenge mission. Pakistan is having trouble balancing its politico-economic connections with China and the US. Both believe Pakistan is delaying fulfilling its obligations. They see Pakistan as a scumbag, believe their influence over Pakistan is waning.

Pakistan is confronted with internal difficulties regarding economic instability and political uncertainty which is the result of inexperience and gaffes. Pakistan is confronted with external challenges too. The first is dealing with the International Monetary Fund (IMF), and the second is getting rid of the Financial Action Task Force (FATF). According to the IMF, Pakistan must reduce its spending to meet its income. The FATF is unforgiving of the human and material losses inflicted on India by the Mumbai attacks of 2008.

10.2. Opportunities

The withdrawal of NATO from Afghanistan, Russia's comeback, China's growing stakes in Pakistan following the launch of CPEC, and Iran's favorably situated actions have all transformed the regional strategic landscape. As a result, Pakistan has more diplomatic opportunities than in the past, which would aid in the restoration of its economy and the strengthening of its international image. Furthermore, the NATO withdrawal from Afghanistan has increased Pakistan's regional importance. The U.S.,

Russia, and China are currently requesting Pakistan's assistance in facilitating Afghan reconciliation negotiations (IPRI, 2022).

In the framework of the Afghan reconciliation effort, the US-Pakistan relationship is one of the most promising. Pakistan, the US feels, may be a useful partner in the reconciliation process, not necessarily in bringing the Taliban to the table to discuss, but in pressing the Taliban to help the U.S. achieve its aims. Pakistan may persuade the Taliban to speak with Afghan officials, something the Taliban has previously refused to do.

Pakistan has benefited from a shifting global order. This unipolar era may be coming to an end as other countries such as China, India, Russia, and Turkey rise. Several mid-level powers are becoming more powerful. Pakistan maintains positive relations with emerging nations such as China, Russia, and Turkey. As the world grows more multipolar, Pakistan will gain from its partnerships with these growing nations. Pakistan is the central lynchpin in this entire scenario as long as the CPEC survives. After undergoing considerable domestic economic changes and rebranding itself as an open international market, Pakistan can realize its aim for an economics-driven foreign policy.

Conclusion

The event of 9/11 has centered the world on a framework of global security that is tainted by American viewpoints. This framework demonstrates the need for extraordinary measures in the fight against terror. Many nations have seen significant changes in their national dynamics as a result of 9/11. However, Pakistan's consequences were far more severe than in other countries. Pakistan continues to pay the price of security politics in the form of long-term consequences in a variety of areas, from security to social, political, and economic. Geographical compulsions cannot be eliminated, the historical and political integration of Pakistan's national security with events in Afghanistan is too deep to be scraped out of its policy framework.

However, Pakistan's post-Kabul reality is just as unpredictable as the world's. The future of Pakistan's regional prominence after any new setup in Afghanistan is inextricably linked to the severity of the security politics that the U.S may still pursue in Afghanistan. Because of CPEC and Pakistan's strategic position in the area, strategic collaboration and interdependence between China and Pakistan have expanded dramatically in the post-9/11 era, and this cooperation will continue to grow in the coming years. Both China and Pakistan want Afghanistan to be a part of the CPEC. Pakistan's foreign policy is to establish a peaceful and stable neighborhood. Pakistan has brokered a round of peace talks between the U.S. and the Afghan Taliban, breaking with its history of joining blocs or participating in proxy wars.

Pakistan's foreign policy has prioritized regional integration, peaceful cohabitation, and economic development Regional rivalries, particularly between Iran and Saudi Arabia, can limit Pakistan's options, compelling it to select one over the other. Pakistan's geostrategic and political realignment with China and Russia has aided the

country in defusing India's hostile diplomatic posture. Similarly, the CPEC has helped to dispel the notion that Pakistan's geo-economics options are restricted to the U.S.

Pakistan's diplomatic goals are based on resolving the China-U.S. conflict and managing adversarial relations with India and Afghanistan. Even in the face of ongoing geopolitical competition between major powers, Pakistan's diplomatic efforts aim to secure its national interests. However, Pakistan needs to continue its efforts for maintaining peace, protect human rights, boost economic cooperation, promote democratic values, and make society resilient in fighting against terrorism and religiously inspired extremism. This way, Pakistan will be able to restore its credibility, magnify its image abroad and secure its due share in making progress in Asia, which is likely to become a new power center of the world in the present century. Pakistan is at a crossroads in history and at a critical moment in time. Through geo-economic regional cooperation, trade promotion, and economic integration, it requires visionary policies and practical steps to strengthen its position in the region. Peace and regional stability can promote regional collaboration and long-term sustainable growth, which can assist the country's economic investment and growth. Pakistan needs to focus more on this technique in order to gain legitimacy, alliance, and a prestigious position in the international community.

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Effectiveness of Problem-Solving Therapy to Improve Quality of Life among University Students

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Abstract

The present study investigated the effectiveness of problem-solving therapy in improving the quality of life among university students. From an undergraduate population, female participants (N = 30) were asked to complete the World Health Organization Quality of Life BREF (1995) and were then randomly placed in the control group or the experimental group which then received eight sessions of problem-solving therapy. Problem-Solving Therapy: A Treatment Manual published in 2012 by Nezu, Nezu, and D'Zurilla was used. Once therapy was completed following the seven steps as outlined by the author, participants from both the experimental and control groups completed the World Health Organization Quality of Life BREF scale once again. This was an experimental design with an independent group design and a repeated measures design. Results showed that quality of life increased among participants in the experimental condition after receiving PST while it reduced in the control group. Receiving group problem-solving therapy was an effective intervention in increasing coping tendencies among individuals. Problem-solving therapy is a cognitive-behavioral intervention designed to help individuals cope with stressful life circumstances. Further research of this nature should attempt to control for extraneous variables in the participants' environment. Campus counselors and educational social workers can benefit from applying the findings of this study. School psychologists can use Problem-solving therapy to increase the quality of life of students who may have various stressors.

Keywords: Problem-solving therapy, World Health Organization Quality of Life BREF, Scale

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Introduction

Problem-solving is an essential skill in daily life. Knowing how to identify and confront problems, implement solutions, and learn from them is important for a functional and happy life. Daily stressors are present in everyone's life however, the student population is one that can be said to face more problems than nonstudents. Problem-solving therapy is designed to help individuals learn to cope with major and minor problems. Students may have family, financial, and social issues along with their demanding educational responsibilities. The more stressors in one's life, the lower the quality of life will be. Implementing problem-solving therapy in university students to increase their quality of life can make students better fulfill their responsibilities as students and as members of society in general. The World Health Organization defines the quality of life in a subjective manner based on how an individual perceives their personal position in life in their own culture and the value system of which they are a part. One's quality of life depends on their position in relation to personally set goals, standards, concerns, and expectations (World Health Organization, 2023).

A complication or difficulty is a circumstance that needs a corrective response such as regaining emotional balance when an effective response is not immediately available. Multiple factors make a situation into a problem. The factors can be moving to a new environment, ambiguity such as not knowing how a relationship is progressing, unpredictability such as feeling no control over a career path, conflicting goals such as different opinions regarding where to live or which house to buy, performance skills deficit such as being unable to communicate with coworkers, and lack of resources such as inability to pay rent or tuition. Realizing a problem is made when either immediately or after multiple failed attempts. A problem can be a single-time occurrence such as missing the bus to work or dropping one's phone in a mud puddle. A problem can also be a series of related events, contrary parental restrictions, or deviant employee behavior. A problem may be chronic and ongoing such as continuous pain, medical illness, or feelings of loneliness (Nezu, Nezu, and D'Zurilla, 2013).

Problem-solving therapy (PST) is a cognitive behavioral intervention that attempts to aid individuals in coping with the life events that cause stress through rigorous and effective problem-solving. PST's underlying assumption of is that maladaptive coping leads to psychological issues such as depression. PST is often used to help the depressed because it teaches them to learn skills for better management of daily life problems. Unlike cognitive-behavioral therapy, the focus of PST is not just on changing thoughts and feelings but also on identifying and managing problems (Nezu, Nezu, and D'Zurilla, 2013).

Problem-solving therapy presents a way for the client to solve problems robustly. Cognitive and behavioral influences are used to assist people so that they become more capable of solving problems to ensure their quality of life. Problems are unavoidable and inescapable but those who know how to effectively solve them are more adaptable and

successful than those who are rigid and unable to adapt their behaviors and cognitions so that various problems are resolved. PST strives to increase resilience and prevent emotional setbacks in the clients.

PST has been used in many contexts and on different populations to increase life quality. Group problem-solving therapy was done on depressed patients and the effectiveness of this therapy was apparent to all the group members. PST has also been effective on individuals such as cancer patients and caregivers. PST can also be used as part of a larger treatment package with multiple components: education, relaxation training, progressive muscle relaxation, etc. (Nezu, Nezu, and D'Zurilla, 2013).

2. Theoretical Framework

PST identifies two problem-solving orientations: positive and negative. However, individuals may exhibit a mix of these orientations, such as being positive in academic or career issues but negative in interpersonal ones. This aligns with Mischel and Shoda's cognitive-affective system theory, where behavior varies based on individual differences. Clients in therapy may have diverse orientations toward different problems. PST recognizes the importance of addressing negative orientation styles in specific life domains. Studies excluding orientation styles had lower PST effectiveness. Cognitive-affective theorists argue that behavior stems from self-perception in certain circumstances, not a fixed personality trait (Nezu, Nezu, & D'Zurilla, 2013). Below is the visual depiction of the theory in relation to situational features.
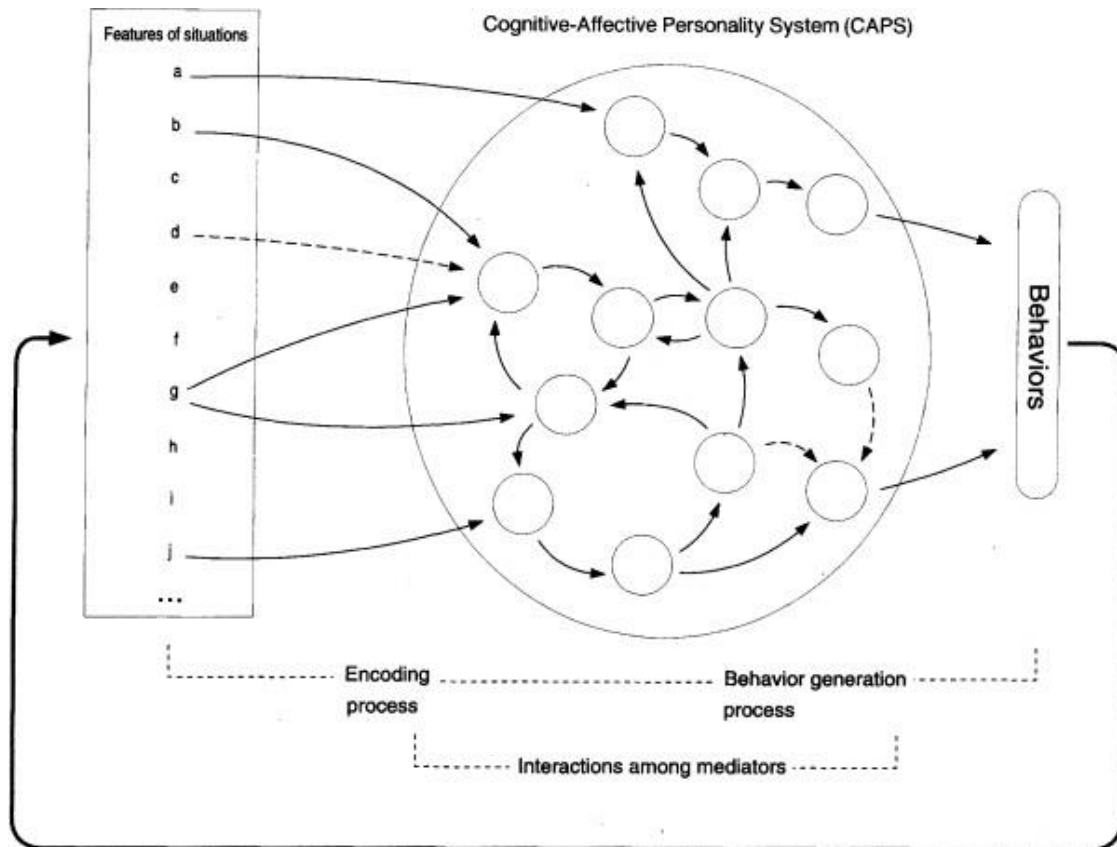
Figure 2.1: Cognitive Affective Personality System

3. Literature Review

Nguyen et al. (2018) examined PST's impact on decision-making among healthy senior citizens in primary care. Older adults, despite cognitive health, sometimes struggle with decision-making due to irregular aging of frontal lobes, affecting executive functioning. The study aimed to assess whether PST, a psychosocial intervention, could enhance decision-making abilities in emotionally and cognitively healthy individuals aged 65 and above. Twenty participants were randomly assigned to either the no-treatment control group or the PST condition. The PST group received four 45-minute sessions over two weeks. The Iowa Gambling Task (IGT) measured outcomes for both groups. A significant difference emerged, with the intervention group showing notably improved decision-making skills, advantageous choices, and better executive functioning. PST appeared effective in enhancing complex decision-making abilities in older adults.

Zhang et al. (2018) conducted a meta-analysis and systematic review to assess PST's potential in reducing anxiety and depression among primary care patients. Given the increasing demand for anxiety and depression treatment in primary care, the study searched six databases and conducted manual searches. Out of 153 initial studies, 11 studies with 2072 participants met the inclusion criteria for synthesis. The results

indicated that PST had a significant treatment effect on primary care patients with depression or anxiety. Moreover, when a physician was involved in the PST, improvements were observed among patients with depression and/or anxiety in primary care.

Chinaveh (2010) conducted a study to assess the efficacy of PST on college students. PST training has been used to make the quality of life better for the recipients. A study included 79 college students who reported low quality of life and mental health. Some were randomly placed in 6 weekly training groups for problem-solving therapy or the control condition with no training. Quality of life and mental health was assessed on the first and last days of the program along with the control group. Both qualities of life and mental health increased after the PST program but not in the control group.

Chinaveh (2013) researched the impact of PST on adjustment and coping skills in college students. The study explored how PST could enhance psychological adjustment and coping skills among Iranian college students. Eighty students with low coping responses were randomly assigned to the PST training group or the no-treatment control group. The PST group received 8 weeks of therapy. Coping skills, including avoidance and approach responses, were evaluated at the program's start and 30 days later, along with the control group. The training group showed increased mental adjustment and coping responses. The way individuals perceive and cope with everyday life issues is linked to their appraisal of problem-solving ability.

Gellis et al. (2008) conducted a randomized control trial was done to see the effectiveness of PST on older adults with minor depression who were living in-home care. This study placed 30 older patients in the PST group and 32 were placed in the treatment-as-usual group which was the control condition. Results showed that those in the PST as compared to the control group had significant improvement in depression symptoms and problem-solving abilities.

4. **Rationale**

Problem-solving therapy (PST) has shown promise in improving the quality of life across diverse cultures and countries. However, there remains a gap in research concerning its effectiveness on university students, particularly in Pakistan. This study aims to address this gap by assessing the effectiveness of PST developed by an American professor in the Pakistani population. If successful, this therapy may benefit other Pakistani groups, such as parents of mentally or physically challenged kids, newlywed couples, cancer patients, teenage mothers, and caretakers. Previous studies assessing PST's effectiveness have used various designs in different countries, but an experimental design has not been applied in Pakistan. This study seeks to fill this gap, focusing on high-stakes exam situations faced by school and university students, where PST could be utilized by campus counselors to alleviate stress and improve their quality of life. The

results may have broader implications for the well-being of various populations in Pakistan.

5. Objectives

The goals of the study are

1. To compare whether there is a significant difference in the QOL of university students in the experimental and control groups at the pre-intervention level.
2. To evaluate whether the treatment group of university students will have a higher QOL as compared to the control group at the post-intervention level.
3. To assess the impact of the intervention on the QOL among university students in the treatment group by comparing their pre- and post-intervention scores.
4. To determine if there is a significant change in the QOL of the control group from pre- to post-intervention levels among university students.

6. Hypotheses

1. There is likely to be a significant difference in pre and post-intervention scores in terms of QOL in the treatment group.
2. There would likely be no significant difference in the QOL of the control group at the pre-post level.
3. There is likely to be a significant difference in both groups (experimental and control) at the pre-intervention level in terms of QOL.

4. The treatment group is likely to have a significantly higher level of QOL as compared to the control group at the post-intervention level.

7. Research Design

An experimental design aims to carry out research in an objective and controlled way to establish a cause-and-effect relationship between the independent variable and the dependent variable by relying on random assignment. This research is an experimental design with an independent group design and a repeated measures design. An independent group experimental design is one in which different people are placed in different experimental conditions. A repeated measures design is when multiple measurements are taken of the same variable from the same participants twice or more. These methods are mostly used in research involving the investigation of the effects of an intervention in two groups (Creswell, 2013).

Through the World Health Organization Quality of Life BREF (WHOQOL-BREF) questionnaire, measurements were taken before and after the therapy intervention to see changes in scores. Initial screening was done on 50 individuals from which 15 were put in the experimental condition and 15 were put in the control group. A between-subjects design was used in which there were two groups of participants under different conditions. The two groups were the experimental group which got the psychological intervention of Problem-Solving Therapy and the control group. A within-subjects/

repeated measures design was employed pre and post-intervention to assess the experimental group.

8. Sample and Sampling Strategy

The sample size was N=30, aged 17 to 21 years, initially selected from 50 participants. Domain scores were calculated for all students, and 15 with low quality of life were randomly assigned to each group: experimental and control. The sample included undergraduate female students proficient in English from Kinnaird College for Women, chosen through convenient sampling. Each of the 30 participants with low quality of life scores was randomly assigned to one of the two groups, ensuring unbiased placement and equal opportunities (Bhandari, 2021).

9. Inclusion criteria

Participants in this study met specific criteria. All were single females aged 17-21, fluent in English, willing to receive therapy, and currently enrolled in the Applied Psychology undergraduate program at Kinnaird College.

10. Exclusion criteria

This study excluded students with any mental disorder or physical illness. Also, students unwilling to attend intervention and those with a high quality of life were excluded as well.

Table 1: Sociodemographic Characteristics of Participants

Sample Characteristics	Experimental Group		Control Group		Full Sample	
	n	%	n	%	n	%
Gender						
Female	15	50	15	50	30	100
Marital Status						
Single	15	50	15	50	30	100
Education						
Undergraduate	15	50	15	50	30	100
Employment Status						

Unemployed	12	80	13	86.66	25	83.33
Employed	1	6.66	1	6.66	2	6.66
Self-employed	2	13.33	1	6.66	3	10

Note. *N = 30 (n = 15 for each condition). Participants were on average 18.87 years old (SD = 0.94), and participant age did not differ by condition.*

Table 2.1 shows the demographic characteristics of participants. The study consisted of 30 participants whose ages ranged from 17 to 21 years with 18.87 years being the mean age. Every participant was single was fluent in English (100%), and was an undergraduate student majoring in psychology (100%). Most of the participants were unemployed (83.33%). However, a few girls were employed and working alongside their studies (6.66%). A few participants were self-employed (6.66%).

11. Data collection instruments

11.1 Problem-Solving Therapy Treatment Manual. The manual used is titled Problem Solving Therapy: A Treatment Manual (2012) written by Nezu, Nezu, and D'zurilla. This treatment manual is written in easy English. The manual is a laudable and distinctive resource that is open to use for a wide variety of individuals with mental and or physical problems. It has been tested for efficacy multiple times but has yet to be added to the student population. Maladaptive coping is what causes individuals to become distressed during stressful events and one can use the manual to help themselves feel better or the manual can be administered.

11.2 World Health Organization Quality of Life- BREF (WHOQOL-BREF). The WHOQOL-BREF Scale is a 26-item scale that measures one's quality of life. Each item is rated on a Likert-type scale ranging from 1 to 5. Each ordinal item is asked in regard to the past two weeks and the subject is asked to keep in mind their standards, hopes, pleasures, and concerns. Items 3, 4, and 26 are reverse-coded. There are two items measuring general health which are analyzed separately and four domains across which the other 24 items are spread: physical health, psychological health, social relationships, and environment. Items in each domain are totaled to get domain total scores (Vahedi, 2010).

12. Procedure

Pilot Study. A pilot study was done before the main study to check the feasibility, duration, and comprehension of the therapy intervention. After taking consent from a sample of 4 participants before administering the scale for screening, PST was implemented in a group setting. Relevant changes were made including printing all the

worksheets for the sessions and increasing the session duration from 30 minutes to 50 minutes.

      Main Study. Initially, consent was taken from the institute where research was conducted. Those participants who consented to complete the WHOQOL-BREF questionnaire were selected through convenience sampling.

      The main study included 8 sessions for the treatment group and each session was 50 minutes in duration. First, an electronic survey of the WHOQOL-BREF was created so that participants could conveniently fill out the scale. Then 15 participants with a low quality of life were randomly placed in the treatment group and 15 were put in the control group. The World Health Organization Quality of Life- BREF survey was administered pre and post-intervention which assessed the self-reported quality of life through the following four domains: physical health, psychological health, social relationships, and environment. Two initial items assessed general life quality and overall health.

Table 2: 1st Session Plan for the Experimental Group

Assessment	Domain	Rationale
Introduction to PST and Problem Identification	Overview (10 minutes) Icebreaker Activity (10 minutes) Overview of PST Identify problems Worksheet	All participants were warmly welcomed by the researcher and were given an introduction to PST. Group members introduced themselves and share a fun fact about themselves to promote rapport. Group members were explained the concept and benefits of Problem-Solving Therapy. Participants were instructed to identify one specific problem they wanted to work on during the therapy. Participants were given Problem Identification worksheet in which Students wrote down the problem they want to address and describe how it impacted their life.

Table 3: 2nd Session Plan for the Experimental Group

Assessment	Domain	Rationale
	Goal setting was done by teach students how to set	Students were explained goal setting and the concept of SMART goals

Goal setting and generating solutions	achievable goals (10 minutes)	Participants were explained the importance of identifying problems and then coming up with solutions
	Generating Solutions (15 minutes)	Students wrote down their specific goals and brainstormed potential solutions for the identified problem through group discussion.
	Worksheet: Goal Setting and Solution Options (25 minutes)	

Table 4: 3rd Session Plan for the Experimental Group

Assessment	Domain	Rationale
Evaluating and Choosing Solutions	Evaluating and choosing solutions (50 minutes)	Students were asked to evaluate each written solution to their problem. This was done through a worksheet and group discussion in which participants have one another options and opinions about how problems could be addressed. Participants then evaluated potential solutions and choose the most feasible one for their problem by the end of the session.

Table 5: 4th Session Plan for the Experimental Group

Assessment	Domain	Rationale
Implementing the chosen solution	Creating an Action Plan (20 minutes)	All participants were assisted in creating an action plan to implement the chosen solution.
	Discussion (15 minutes)	All participates engaged in sharing their actions plan with peers and offered suggestion to one another.
	Worksheet: Action Plan (15 minutes)	Students outline the steps they will take to implement the chosen solution and identify potential obstacles.

Table 6: 5th Session Plan for the Experimental Group

Assessment	Domain	Rationale
Review and Troubleshooting	Progress Review (15 minutes) Challenges were tried to be identified and understood which the participants felt (15 minutes) Worksheet: Progress Review and troubleshooting (20 minutes)	All participants were asked to review the progress they had made. Participants shared their challenges and everyone engaged in discussion. Participants reflected on their progress and noted any challenges they encountered since the last session.

Table 7: 6th Session Plan for the Experimental Group

Assessment	Domain	Rationale
Discussion making skills	Teach effective decision making and the decision making process (25 minutes) Worksheet: Decision-Making Process (15 minutes) Discussion (10 minutes)	Through engaging in decision making process participants were asked to make skills to handle future problems. Participants applied the decision-making process to a hypothetical problem and wrote down the steps they would take to make a decision. Participants discussed what they wrote and gave suggestions to one another.

Table 8: 7th Session Plan for the Experimental Group

Assessment	Domain	Rationale
Interpersonal Problem-Solving	Interpersonal Skills (25 minutes)	Focus on problem-solving in interpersonal relationships.

	Worksheet: Interpersonal Problem-Solving (15 minutes)	Students practice interpersonal problem-solving through role-playing scenarios.
	Discussion (10 minutes)	Session ended with participants discussing importance of interpersonal skills.

Table 9: 8th Session Plan for the Experimental Group

Assessment	Domain	Rationale
Future Application and Closure	Review Learned Skills (15 minutes) Future Application (15 minutes) Worksheet: Future Application (10 minutes) Closure (10 minutes)	Review learned skills, discuss future application, and were provided closure. Students were recommended to use, practice, and implement what was learned during therapy in real life as well. Students reflected on how they plan to apply PST techniques in their future lives. All students were thanked and were given a token of appreciation.

Session 1: Introduction to PST and Problem Identification In this session, we begin by introducing Problem-Solving Therapy (PST) to the group. We explain that PST is a structured approach to resolving life challenges and improving coping skills. To foster a comfortable environment, we start with an icebreaker activity, where each member introduces themselves and shares a fun fact. Afterward, we provide an overview of PST, highlighting its benefits for enhancing problem-solving abilities. We then move on to the main activity, which involves identifying individual problems. Each student is asked to think about one specific problem they are currently facing and its impact on their daily life. We provide a worksheet to help them describe their problem in more detail.

Session 2: Goal Setting and Generating Solutions During this session, we delve into the process of setting achievable goals and generating potential solutions for the identified problems. We explain the concept of SMART goals (Specific, Measurable, Achievable, Relevant, and Time-bound) to ensure students set clear and realistic objectives. Next, we encourage brainstorming and group discussions to generate various solutions for each problem. The focus is on quantity, not quality, during this stage. Each student is provided with a worksheet to record their specific goals and list potential solutions related to their identified problem.

Session 3: Evaluating and Choosing Solutions In this session, participants were guided through the process of evaluating and selecting the most suitable solution among the options generated in the previous session. We discuss the importance of considering the pros and cons of each solution and assessing its feasibility. Group members share their thoughts and offer feedback to support one another. With the help of a worksheet, students evaluate the potential solutions they listed and make a decision on which one they believe will work best for their particular problem.

Session 4: Implementing the Chosen Solution This session focuses on turning the chosen solution into a practical action plan. Students learn how to break down the selected solution into actionable steps and create a timeline for implementation. We discuss potential obstacles that might arise during the process and explore strategies to overcome them. Participants are encouraged to share their action plans with the group and provide feedback and suggestions. The worksheet provided helps students outline their action plans and anticipate any challenges they may face.

Session 5: Review and Troubleshooting In this session, we review students' progress in implementing their chosen solutions since the last session. Each participant shares their experiences, successes, and any obstacles they encountered. The group offers support, encouragement, and constructive feedback. We focus on troubleshooting the challenges faced and explore alternative approaches to address the problems. The worksheet helps students reflect on their progress and document any challenges or setbacks they experienced, enabling them to gain insights into their problem-solving journey.

Session 6: Decision-Making Skills During this session, we shift the focus to decision-making skills, an essential aspect of effective problem-solving. We discuss the decision-making process, emphasizing the importance of gathering relevant information, considering alternatives, and weighing the potential outcomes. Role-playing exercises and hypothetical scenarios are used to practice decision-making skills. The worksheet provided guides students through applying the decision-making process to a specific problem they might encounter in real life. Then participants engaged in discussion.

Session 7: Interpersonal Problem-Solving In this session, we explore problem-solving in the context of interpersonal relationships. We discuss effective communication, active listening, and conflict resolution skills. Participants engage in role-playing activities to practice interpersonal problem-solving within the group setting. The worksheet helps students reflect on their interpersonal problem-solving experiences during the role-plays.

Session 8: Future Application and Closure In the final session, we review the problem-solving skills and techniques learned throughout the therapy. We encourage participants to share their insights, growth, and personal victories during the process. As a group, we discuss how they plan to apply PST techniques in their future lives to address new challenges. The session concludes with closure, allowing each participant to express their final thoughts and feelings about the therapy experience. The worksheet provided guides students through reflecting on their future application of PST techniques and reinforces

their commitment to using problem-solving skills in their daily lives. The group therapy concludes with a positive and supportive atmosphere, fostering a sense of accomplishment and empowerment among the participants.

13. Ethical Considerations

Consent to collect data from participants was obtained from institute department officials. The WHOQOL-BREF, available in multiple languages and in the public domain, was used for this research. All participants willingly gave verbal and written informed consent before the study, with the option to withdraw at any point. Confidentiality and anonymity were upheld. Participants were encouraged to ask questions, and their concerns were addressed throughout the study. Interested participants received the results and further debriefing if needed. The control group was ethically provided with a brochure detailing PST steps and intervention techniques after the study. Data were analyzed using SPSS with integrity.

14. Statistical Analyzes

Data were analyzed using the Statistical Package for the Social Sciences version 29. Inferential and descriptive statistics were used which include Descriptive Statistics: mean (M) and standard deviation (SD). Wilcoxon Signed-Rank test was used to check for the mean rank differences within groups at pre and post-intervention levels. To examine the effectiveness of PST, the differences between the experimental group receiving therapy and the control group were seen through the Mann-Whitney U test. This is the nonparametric test that was used to decide whether the pretest means scores are lower than the post-test mean scores of WHOQOL-BREF.

15. Results

In this study, female university undergraduate students (N=15) received PST to assess its impact on subjective life quality, evaluated using the WHOQOL-BREF. Measures used in the study underwent a reliability analysis, and psychometric properties were presented in Table 3.1. Descriptive statistics in Table 3.2 calculated means and standard deviations for demographic data. Analysis of the data in two domains was used to determine the effectiveness of the WHOQOL-BREF. First, to evaluate the impact of the intervention, the experimental group's pre and post-scores were compared using the Wilcoxon Signed Rank Test for within-group differences. The findings are shown in Tables 3.3 and 3.4. Secondly, pre and post-intervention scores on the WHOQOL-BREF were then compared between groups to evaluate group differences. Non-parametric tests were applied during analyses due to the small sample size (N = 30). The results of both treatment and control group were analyzed using the Mann-Whitney U Test, which is the non-parametric version of the Independent Sample T-Test. Table 3.5 shows the results prior to the intervention while Table 3.6 compares

the post-intervention results between the experimental and control group.

16. Reliability Analysis

Table 10: Psychometric Properties of WHOQOL- BREF Scale

Measure	Pre-test	Post-test	Pre-test	Post-test		Pre-test	Post-test
	M		SD	Range	Cronbach's a		
WHOQOL-BREF 130	86.47 .79	91.40 .89	10.57	12.14	26-		

Note. M = Mean, SD = Standard Deviation, a = Cronbach's alpha.

A reliability analysis of the scale used in the current study was done to find the internal consistency of the scale. With a Cronbach's alpha of .79 at the pre-test level, the World Health Organization Quality of Life- BREF showed acceptable internal consistency. The post-intervention Cronbach's alpha was .89 demonstrating good reliability.

17. Descriptive Statistics
Table 11: Means and Standard Deviations of Domain Scores

		Pre-test	Post-test	Pre-test	Post-test
Domains	N	M		SD	
Physical Health	30	3.18	3.44	.46	.55
Psychological Health	30	3.17	3.20	.54	.58
Social Relationships	30	3.44	3.67	.67	.54
Environment	30	3.46	3.65	.56	.63
Overall	30	3.54	3.88	.57	.63

Note. N = No. of participants. M = mean, SD = Standard Deviation

The table shows the domains of the WHOQOL-BREF. The results show that the physical health subjective rating increased from 3.18 to 3.44. The scores in the psychological health domain also increased slightly going from 3.17 to 3.20. The social relationships scores also increased going from 3.44 to 3.67. Scores in the environment

domain also increased from 3.46 to 3.65. And lastly, scores from the two items measuring overall quality of life and satisfaction with health also increased going from 3.54 to 3.88.

Table 12: Wilcoxon Sign-Rank Test Showing PST Intervention Effect on Quality of Life at Pre (n = 15) and Post (n = 15) Levels of Intervention within Treatment Group

Variable	MR	Z	p
Quality of Life AI - BI	4.13	-2.47	.01**
	9.41		

Note. *MR = Mean Rank, BI = before intervention, AI = after intervention, *p<.05, **p<.01, ***p<.001.*

       The Wilcoxon Signed-Rank test showed that there is a significant within-group mean rank difference in pre and post-intervention assessment on the quality of life scores. The students in the treatment group scored significantly higher in WHOQOL-BREF (Z = -2.47, *p* = .01) at post-intervention assessment as compared to pre-intervention assessment. Participants' quality of life increased after receiving group problem-solving therapy. These findings are consistent with the first null hypothesis since a significant difference is present between pre and post-intervention scores in the treatment group.

Table 13: Wilcoxon Sign-Rank Test Showing PST Intervention Effect on Quality of Life at Pre (n = 15) and Post (n = 15) Levels of Intervention within Control Group

Variable	MR	Z	p
Quality of Life AI - BI	6.00	-.70	.48
	6.86		

Note. MR = Mean Rank, BI = before intervention, AI = after intervention, *p<.05, **p<.01, ***p<.001.

       The Wilcoxon Signed-Rank test demonstrated that the control group had insignificant within-group mean rank differences in pre and post-intervention assessment on the quality of life scores. The students in the control group did not elicit a significantly different score in WHOQOL-BREF (Z = -.70, *p* = .48) at the post-intervention assessment. Participants' quality of life did not improve when they had not received group problem-solving therapy. These findings are consistent with the second null hypothesis since there is no difference in the QOL of the control group at the pre-post level.

Table 14: Mann-Whitney U Test showing Pre-intervention Quality of Life scores between Treatment group (n = 15) and Control group (n = 15)

Variables	Group	MR	U	Z	p
WHOQOL-BREF	Treatment	12.23	63.50	-2.03	.04*
	Control	18.77			

Note. *MR = Mean Rank, *p<.05, **p<.01, ***p<.001.*

The Mann-Whitney U Test results showed that the treatment group receiving the intervention had a significantly lower quality of life (MR = 12.23, p = .04) as compared to the control group at pre-intervention. These findings are parallel to the third hypothesis since there is a significant difference in the experimental and control groups at the pre-intervention level in terms of QOL.

Table 15: Mann-Whitney U Test showing Post-intervention Quality of Life scores between Treatment group (n = 15) and Control group (n = 15)

Variables	Group	MR	U	Z	p
WHOQOL-BREF	Treatment	14.70	100.50	-.49	.61
	Control	16.30			

Note. *MR = Mean Rank, *p<.05, **p<.01, ***p<.001.*

The results of the Mann-Whitney U test show that the experimental group does not have a significant mean rank difference in the quality of life as compared to the control group at the post-intervention level. These findings provide evidence against the fourth null hypothesis since the hypothesis was inclined towards a significantly higher level of QOL in the treatment group as compared to the control group at the post-intervention level but, this was not apparent.

18. Discussion

The outcomes of this research provide insight into the effectiveness of PST which is a cognitive behavioral intervention to help reduce the overwhelming stressors of life among undergraduate university students. The purpose of this study was to see whether a difference in the quality of life scores would emerge between the experimental group and the control group. The WHOQOL-BREF was administered pre and post-intervention to assess for differences in the scores. Scores in the experimental condition improved while scores in the control condition decreased most likely due to environmental factors. While the homogeneity of this sample is useful for assessing the experimental effects of PST on quality of life, it reduces the external validity of the findings

The results of this study support three of the four hypotheses since there was a significant difference in pre and post-intervention scores of QOL in the treatment group. Also, there was no significant difference in the QOL of the control group at the pre-post level. There was a significant difference in the QOL between the experimental and control group at pre-intervention. Evidence against the fourth hypothesis was found.

Keeping in mind the first hypothesis, the Wilcoxon Signed-Rank test showed that there is a significant within-group mean rank difference in pre and post-intervention within the treatment group based on the assessment of the quality of life scores. The students in the treatment group had higher quality of life scores at post-intervention assessment as compared to pre-intervention assessment. The results of this study are consistent with previously conducted randomized control trials assessing the efficacy of PST.

The Wilcoxon signed-Rank test showed that the control group had insignificant within-group mean rank differences in pre and post-intervention assessment on the quality of life scores. Since the control group was not given any therapy, their quality of life was expected to not change.

The third hypothesis predicted a difference in QOL scores in the experimental and control group before intervention. The present findings can be seen from the statistical analysis of the Mann-Whitney U Test measuring pre-intervention scores. The participants in the experimental group had lower baseline scores with a mean rank of 12.23 than the participants in the control group which had higher baseline scores with a mean rank of 18.77. After conducting the Mann-Whitney U test for the post-intervention scores, the mean rank of the experimental group was 14.70 while for the control group, it was 16.30. As can be seen, the scores for the experimental condition increased while the control group scores' mean dropped.

Evidence was apparent against the fourth null hypothesis which predicted a significant increase in the QOL scores post-intervention as compared to the control group. Results of the Mann-Whitney U test show that the experimental group does not have a significant mean rank difference in the quality of life as compared to the control group at the post-intervention level. There may have been multiple reasons for the change in the scores of the control condition which has led to the insignificant mean rank differences between the two groups. Since this was an experimental research, threats to internal validity are present. However, it should be noted that threats to internal validity are inevitable when using this type of experimental design. Whereas past researchers have found differences between the experimental and control group (Gellis et al., 2008) the present study has shown that the experimental group does not have a significant mean rank difference in the quality of life as compared to the control group at the post-intervention level.

Multiple alternate explanations for the cause of changes in the scores of the control group can be understood and explained. Since the scores of the control can be seen to have decreased over time without any intervention, the quality of life scores of the control group participants was impacted by external environmental causes. There may be multiple reasons for this including selection bias, selection-maturation interaction, history, testing, and social interaction as described by Donald T. Campbell (Flannelly et al., 2018).

Selection bias is a potential bias in the participants who were placed in the experimental and control groups. Participants in both conditions could have differed in some important ways leading to the present results. Since the participants in the control

and experimental condition were undergraduate psychology major students, they could have interacted with one another leading to selection-maturation interaction (Flannelly et al., 2018).

History is a relevant potential threat because this study lasted several weeks. History consists of what the participants might have experienced during the course of the experiment other than the therapy intervention itself. In the present study, the ending sessions were done with participants in the experimental group close to the semester midterm exams. After the last sessions, the WHOQOL-BREF was administered in both groups. This was a time of high stress involving multiple assignment submissions, tests, and exams. This may have been a reason why the control group's scores of quality of life were reduced (Flannelly et al., 2018).

Testing could be a potential threat because the same questionnaire was used twice on all participants. The initial completion of the questionnaires could have made participants more receptive and aware of their environment and current quality of life. So when the participants initially completed the form, they may have reconsidered their subjective feelings about their quality of life which could lead to changes in responses at the re-test stage (Flannelly et al., 2018).

19. Strengths and Limitations

This study had several strengths since this research design was a replication of numerous research already conducted and therefore this study can be replicated as well. This study consisted of therapy sessions conducted practically which can be implemented for others outside the study as well. Practical applications of cognitive behavioral therapy have had high success rates and the present experimental group results are consistent with previous research.

There are some limitations to this study that are obstacles to the generalization of the results to other settings. The sample size is smaller when compared to the samples used by other studies assessing PST effectiveness. Using a larger sample could give more accurate results.

20. Implications, Suggestions, Conclusion

The implications of this study are of particular interest to educational social workers and campus counselors since poor problem-solving coping and negative problem orientation can reduce the effectiveness of educational institutes in imparting knowledge to students. This study suggests that implementing PST among undergraduate students will lead to effective problem-solving abilities. Despite the limitations mentioned, these results suggest several theoretical and practical implications.

Further research should attempt to implement better sample recruitment strategies so that the sample is greater in size and with more variability. Further research should attempt to control confounding variables in the environments of the participants so that threats to internal validity can be reduced.

The study results show that participants' quality of life increased after receiving group problem-solving therapy. PST is an effective talk therapy intervention to use among groups of students to increase. Students showed a better quality of life after therapy meaning that the psychological and behavioral skills taught throughout the session were

beneficial in increasing psychological, physical, social, environmental, and overall satisfaction with life. The findings of this study add to the expeditious research about talk therapies improving the quality of life of various populations. We hope that the current research will stimulate further investigation of this important area.

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Household-level Food Insecurity in Hunza Valley, Pakistan: An Experience-based and Psychosocial Assessment

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Abstract

Food security is an important phenomenon especially when its measurement goes beyond mere availability of food to its affordability and assimilation. The instant study employed a direct measurement of food insecurity at the household level in Hunza Valley, Gilgit Baltistan (GB), Pakistan. The Household Food Insecurity Access Scale (HFIAS) which is an experience-based tool to measure food insecurity at household level was used with certain adaptations and additional modules of socio-economic parameters. Primary data was collected on a structured questionnaire from 340 respondents during October to November, 2023. The representative sample was drawn by employing stratified random sampling technique to capture the difference in psychosocial assessment of food insecurity among population living in three distinctly separated locations of Hunza Valley i.e. Central Hunza, Lower Hunza and Upper Hunza. HFIAS was found to be a valid and consistent instrument for assessing the frequency and reliability of food accessibility in Hunza. It was observed that roughly four out of five households showed anxiety and uncertainty about food insecurity, and they were equally concerned about quality and quantity of food they consumed. Overall, 41.6% of households were food secure, 5.5% of households were mildly food insecure whereas 40.9% and 12.0% of households were found to be moderately food insecure and severely food insecure respectively. With respect to diversity of food insecurity, the Central Hunza was found to have better situation as compared with Lower Hunza and Upper Hunza.

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1.   Introduction

The global population is expected to reach about 9.8 billion by 2050. This anticipated increase questions the world's ability to fulfill the food demand in future (Dorling, 2021). Food security is the ability of a household to obtain an acceptable amount of food on a regular basis using a combination of product, barter, borrowings, food assistance, or gifts. Food insecurity refers to a situation characterized by consistent lack of access to sufficient quantity of nutritionally adequate and safe food, or in other words food insecurity is an uncertain ability to obtain socially acceptable food in a reliable manner (Food & Agriculture Organization (FAO), 2008). The issue of food insecurity highlights that people are hungry not merely due to the lack of their ability to generate food in enough quantity rather because of the fact that they cannot afford to buy food in required quantity and quality (Pervaiz, Manzoor & Pervaiz, 2022; Zhou, et.al., 2019).

Despite being prominent cereal producers on the global level, both Pakistan and India face the stark reality that the region continues to endure hunger, and the South Asia is classified as one of the world's most food insecure regions. Pakistan is grappling with the dire consequences of food insecurity since its inception. Pakistan has taken significant steps in recent years to improve food security and is approaching self-sufficiency in terms of the food dietary energy accessible to its population (Asghar & Ahmad, 2015).

According to the Global Hunger Index 2022, Pakistan holds 99th position out of 126 countries. With a score of 26.1, Pakistan's hunger level is categorized as 'Serious'. Pakistan is the 5th most populous country in the world and it is a home to approximately 58% of people suffering from malnutrition, and around 20% of them face food insecurity. This places Pakistan among the nations experiencing food insecurity at a critical level (Von Grebmer et al., 2022). The households often face challenges in meeting their nutritional needs due to limited access to markets with fewer food options and lower availability of various food items compared to urban areas (Bashir, Schilizzi & Pandit, 2013). Consumption of food items were below the recommended nutritional requirement in Punjab province of Pakistan (Pervaiz et.al., 2017).

It is important to acknowledge that the food security situation is not consistent throughout the country. Due to variations in topography, socioeconomic factors and physical conditions across different regions, some areas still face greater challenge in achieving food security. Particularly, mountainous regions often experience higher levels of poverty and may struggle with food insecurity (Khan, 2011). Almost 61% of Pakistan's land area is mountainous which accommodates roughly 40 million people (Pakistan Bureau of Statistics, 2013). The variations in economic performance between countries with mountains and without mountains can be attributed to differences in their population size, income levels, road infrastructure, governance factors and the varying effects of external price shocks. Pakistan's mountainous regions are extremely diverse, both in terms of agro-ecological capacity and access to services provided by institutions, resulting in varying food security challenges (Khan, 2011). The individuals residing in mountainous regions face a significant risk of experiencing food insecurity due to multiple factors. These factors include low agricultural productivity; reliance on subsistence economies; challenges posed by rough terrain

and adverse climates; inadequate infrastructure; limited market access; geographical isolation; susceptibility to natural vulnerabilities; and the great expense associated with food production and transportation (Rasul, 2010), (Huddleston et al., 2003) and (Tiwari & Joshi, 2012).

The Hunza is a valley in the mountainous territory of Gilgit Baltistan (GB) located in the northern side of Pakistan. Due to its mountainous terrain and limited means of communication with the country's main population, the Hunza could be regarded as the most vulnerable part of Pakistan with respect to food security. The inhabitants of the Hunza use glacier water for drinking and cultivation of selected crops on a limited area. Usually, natural disasters destroy the water channels and create scarcity of water in the locality. This also causes flash flood that hits the houses, agricultural land and Kara Korum Highway (KKH) and all this directly aggravates the situation of food insecurity. During 2022, Shishper glacier severely damaged the Hassan Abad Bridge which was the Hunza's only bridge connecting it with KKH. It also destroyed many houses and agricultural area near the flash flood area. This caused the blockage of KKH and created uncertainty about food security in the Hunza because the greater part of food items was brought from adjoining provinces i.e. the Punjab and the Khyber Pakhtunkhwa (KPK). Finally, the price of food items went up and it created a spell of hyperinflation in the Hunza.

This current study was planned to look into the unique geographical and natural characteristics of the Hunza. This main objective of the study was to analyze the food insecurity access and propose strategies for improvement in the food insecurity situation of the Hunza. This study could be regarded as the first of its kind which presented a framework dedicated to food accessibility in the Hunza and border areas of Pakistan. An experience-based assessment tool of Household Food Insecurity Access Scale (HFIAS) was mainly used for psychosocial assessment of food insecurity in the region (Coates, Swindale & Bilinsky (2007) . This scale had already been validated successfully and found reliable in the context of Pakistan (Pervaiz, Manzoor & Pervaiz, 2022).

2. Research Design and Data Collection:

This research was carried out in Pakistan's Hunza Valley which is situated at a distance of 581 km from Islamabad - the capital of Pakistan. The Hunza is a mountainous area which is surrounded by glaciers. The total population of District Hunza is nearly 70,000 and population growth rate is 1.18% per annum. The Hunza district is officially divided into three parts i.e. Central Hunza, Upper Hunza (Gojal) and Lower Hunza (Shinaki). The total sample size of 340 was proportionately divided into three parts according to population of respective part of the Hunza i.e. 221 (65%) Central Hunza, 68 (20%) Upper Hunza, and 51 (15%) Lower Hunza. These three localities were further divided into villages. In upper Hunza, some villages were far away, sparsely located and had poor connectivity. Therefore, the respondents were approached when they came to market at Central Hunza for grocery.

To evaluate food accessibility in District Hunza region, a comprehensive and structured questionnaire was developed. The part one of the questionnaire was adapted from HFIAS 9-items whereas the part two included questions related to demographic and socio-economic characteristics of the population. The data for the

instant study was collected in Fall season during October to November, 2023. Before conducting the survey, the pre-testing of the questionnaire was done for evaluating it in local context and possible improvement of phrases, definitions or questions.

The respondents were interviewed face to face, and their responses were carefully recorded regarding their concerns about uncertainty and insufficiency of food during last four weeks by recalling their memory. The demographic information was also collected. Some important terms were carefully explained to the respondents for better understanding e.g. "Households" means those people who live in one house and share their meal; "Lack of Resources" means that the households do not have sufficient resources to consume on their meal; and "three meals per day" were regarded as standard mealtimes in a day. Further, the people in the Hunza use tea with local bread especially in morning breakfast which was regarded as full meal.

The HFIAS 9-items questions were related to decrease in the quality and variety of food, decrease in the quantity of food consumed during meals, and ultimately, missing meals altogether and experiencing hunger throughout the day. If the respondent's answer was "Yes" then the gradation or severity of the situation was also recorded i.e. "Rarely (1-2 times)", "Sometimes (3-10 times)", and "Often (more than 10 times)". On the basis of HFIAS 9-items questions score, the households were divided into four groups i.e. "food secure", "mildly food insecure", "moderately food insecure" and "severely food insecure". The "food secure" households *never* experienced food insecurity during last four weeks and similarly, "mildly food insecure", "moderately food insecure" and "severely food insecure" households experienced food insecurity during last four weeks *1-2 times*, *3-10 times* or *more than 10 times* respectively.

3. Results and Discussions

The data was analyzed by using IBM SPSS Statistics 26 software. The sample size included both male and female household heads. A total of 229 household heads (67.0%) were male whereas 111 (32.6%) were female. It was observed that a total of 324 households (95.3%) had their own houses. Meanwhile, a total of 100 household heads (29.4%) were Govt. employees, 87 (25.6%) were private employees and 153 (45.0%) were self-employed.

The analysis was accomplished in two stages: Firstly, HFIAS was analyzed for whole of Hunza district, secondly, the differences among three regions of the Hunza were also explored into by looking into such sub-regions of the Hunza independently.

4. Validation and Reliability of HFIAS

The internal consistency of the questionnaire was evaluated in order to establish the validity and reliability of a questionnaire meant for determining the prevalence of food insecurity in the Hunza, Pakistan. Cronbach's Alpha is a statistical measure that is used to examine the internal consistency or reliability of a test or questionnaire (Cronbach, 1951). It quantifies the extent to which the questions in a test are correlated with each other and measure the same underlying construct (Kline, 2014). Cronbach's Alpha was calculated using the whole scale of food insecurity as well as two sub-scales: food quality and food quantity. The entire scale comprised all the 9-Items, whereas the food quality sub-scale featured four HFIAS food quality items and the food quantity sub-scale included five HFIAS food quantity items.

The Cronbach's Alpha value for the complete scale was 0.996, according to the analytical results shown in Table-1. Furthermore, the Cronbach's Alpha score for food quality was 0.855, whereas it was 0.980 for food quantity. A high alpha value indicated strong internal consistency, suggesting that the items were reliable and measured the intended construct. A Cronbach's Alpha value of 0.6 to 0.9 is widely considered as indicating adequate instrument dependability (Tavakol & Dennick, 2011). These findings validated the internal consistency of the HFIAS utilized in this study.

Table 1: Internal Consistency of HFIAS

Sr. No	Scale	Cronbach's Alpha	HFIAS Items (n)
1	Food Security (Full-scale)	0.996	9
2	Food Quality (1st Sub-scale)	0.855	4
3	Food Quantity (2nd Sub-scale)	0.980	5

5. Food insecurity access in relation to household conditions

The conditions of households associated with food insecurity access were evaluated by respondents' responses against HFIAS 9-items questions. The results given at Table -2 showed that in District Hunza, the experience of food insecurity (accessibility) responses of "Yes" ranged from 93.2% to 1.5%. The most consistent experience was found against question No. 3 *"Did you or any household member eat a limited variety of food due to a lack of resources?"* It was observed that a total of 93% households which participants in the survey ate certain food they did not like to ate, showed concern about insufficient variety, registered nutritional adequacy, and were unable to consume favorite foods due to shortage of resources.

The question No. 8 and 9 i.e. "*Did you or any household member go to sleep at night hungry* because there was not enough food?" and "Did you or any household member go a whole day without eating anything because there was not enough food?" had the least affirmative response. Only 15% respondents responded that they had to face such adverse situations in previous four weeks. Results showed that respondent had limited variety of food due to a scarcity of resources. Question No. 5 and 6 were about the skipping of meal due to lack of resource. It was observed that 86% households answered "Yes" against question No. 5, and 70% households responded "Yes" in question No. 6. Question No. 8 and 9 had the least affirmative responses.

Table 2: Food insecurity in the household condition related to access

HFIAS Questionnaire-9 Items	No	%	Yes	%
Q1-"Did you worry that your household would not have enough food?"	51	15.0	289	85.0
Q2-"Were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?"	30	8.8	310	91.2

Q3-"Did you or any household member eat a limited variety of food due to a lack of resources?"	23	6.8	317	93.2	
Q4-"Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food?"	33	9.7	307	90.3	
Q5-"Did you or any household member eats a smaller meal than you felt you needed because there was not enough food?"	47	13.8	293	86.2	
Q6-"Did you or any other household member eat fewer meals in a day because there was not enough food?"	101	29.7	239	70.3	
Q7-"Was there ever no food at all in your household because there were not resources to get more?"	318	93.5	22	6.5	
Q8-"Did you or any household member go to sleep at night hungry because there was not enough food?"	335	98.5	5	1.5	
Q9-"Did you or any household member go a whole day without eating anything because there was not enough food?"	335	98.5	5	1.5	

6.   Estimation of HFIAS Domains

According to HFIAS guidelines the scale has been divided in to three sub-domains of food insecurity (access): Anxiety or uncertainty over food; perception that inadequate quality of food; and insufficient quantity of food and its consequences (Coates, Swindale & Bilinsky (2007). Households were asked to recall the history of food consumed in the previous four weeks. First question was about anxiety or uncertainty about food, Q2, Q3, Q4 were about the quality and variety of food with relation to resources, which they consumed during last four weeks. Q5, Q6, Q7, Q8 and Q9 were asked about the insufficient quantity of food which they were consumed due to lack of resources.

6.1   Anxiety and Uncertainty related to Food Insecurity

Anxiety or uncertainty is the sub-domain of HFIAS. The Question No. 1 **"**Did you worry that your household would not have enough food" measured the anxiety or uncertainty of households which they experienced during last four weeks. The results given in Table - 3 showed that 289 (85%) households responded positively whereas only 51 (15%) respondents answered as "No". Further, the region wise analysis was also caried out which showed that respondents in central Hunda experienced the least anxiety or uncertainty about food insecurity as compared with upper and lower Hunza (Central Hunza: 80.09%; Lower Hunza: 89.04% and Upper Hunza: 91.18%).

Table 3 : Anxiety and uncertainty about food Insecurity in the Hunza

Questionnaire Item	Responses categories	N=340	(%)
	No	51	15.0

Q 1. "Did you worry that your household would not have enough food?"	Yes	289	85.0
"How often this happened?"	Rarely	30	8.8
	Sometimes	187	55.0
	Often	72	21.2

6.2   Inadequate Quality of Food

Inadequate quality of food is the second sub-domain of the HFIAS, it measures food insecurity (access) related to food quality. Question 2, 3, and 4 relates to the views of poor quality of meals of households (including variety and food type preferences). The table - 4 shows that the highest positive response was recorded against 93.2% of the respondents against question No. 3 "*Did you or any household member eat a limited verity of foods due to lack of resources*". Question No. 2 and 4 had affirmative score of 91.2% and 90.3% respectively. All three questions had the food insecurity score more than 90%, this indicated that surveyed respondents experienced inadequate quality of food more frequently during past four weeks due to lack of resources. Results indicated that due to lack of resources, households during the previous four weeks ate limited variety and limited amount of food, and any member of the household skipped at least one meal.

Table 4 : Insufficient Quality of food in the Hunza

Question No.	Questionnaire Items	Responses categories	Responses Frequency (%)
Q 2.	"Were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?"	No	8.8
		Yes	91.2
Q 2 a.	"How often this happened?"	Rarely	7.1
		Sometimes	68.1
		Often	24.8
Q 3.	"Did you or any household member eats a limited variety of foods due to a lack of resources?"	No	6.8
		Yes	93.2
Q 3 a.	"How often this happened?"	Rarely	5.67
		Sometimes	71.6
		Often	22.7
Q 4.	"Did you or any household member eats food that you preferred not to eat because of a lack of resources to obtain other types of food?"	No	9.7
		Yes	90.3
Q 4 a.	"How often this happened?"	Rarely	9.4
		Sometimes	71.9
		Often	18.6

6.3 Inadequate Quantity of food Consumption

The third domain of HFIAS is the insufficient food quantity and its effects, it measures the experience of inadequate quantity of food consumption and its consequences which households faced during last four weeks. Question No. 5, 6, 7, 8 and 9 were related to perceptions of limited household food quantity and its consequences. The highest score was observed in Question No. 5 i.e. "*Did you or any household member eats a smaller meal than you felt needed because there was not enough food*". A total of 86.2% respondents experienced that they ate small meal then they felt needed. Question No. 8 and 9 had least affirmative responses of 1.5% as given in Table - 5.

Table 5 : Inadequate Quantity of food Consumption in the Hunza

Question No.	Questionnaire Items	Responses categories	Responses Frequency (%)
Q 5.	"Did you or any household member eats a smaller meal than you felt you needed because there was not enough food?"	No	13.8
		Yes	86.2
Q 5a.	"How often this happened?"	Rarely	9.2
		Sometimes	75.1
		Often	15.7
Q 6.	"Did you or any other household member eat fewer meals in a day because there was not enough food?"	No	29.7
		Yes	70.3
Q 6a.	"How often this happened?"	Rarely	14.6
		Sometimes	71.6
		Often	13.8
Q 7.	"Was there ever no food at all in your household because there were not resources to get more?"	No	93.5
		Yes	6.5
Q 7a.	"How often this happened?"	Rarely	22.7
		Sometimes	36.4
		Often	40.9
Q 8.	"Did you or any household member go to sleep at night hungry because there was not enough food?"	No	98.5
		Yes	1.5
Q 8a.	"How often this happened?"	Rarely	40.0
		Sometimes	60.0
		Often	0.0
Q 9.	"Did you or any household member go a whole day without eating anything because there was not enough food?"	No	98.5
		Yes	1.5

Q 9a	"How often this happened?"	Rarely	60.0
		Sometimes	40.0
		Often	0.0

7 Household food insecurity Access Incidence

According to HFIAS guidelines households were divided into four kinds: "Food Secure", "Mildly Food Insecure", "Moderately Food Insecure" and "Severely Food Insecure". The prevalence of each stage is determined through surveys or assessments that utilize the HFIAS tool and specific criteria for categorizing households based on their responses and food access indicators. The households belonging to these stages of food security are described as below:

Food Secure households have reliable access to sufficient food for an active and healthy life. Food secure households do not experience anxiety or uncertainty regarding their food availability or access. *Mildly Food Insecure households* may have some anxiety or concern about their ability to obtain adequate food, but the quantity, quality, and variety of food they consume are not significantly compromised. Households experiencing mild food insecurity may employ coping methods such as consuming less preferred or cheaper foods or relying on social networks for support. *Moderately Food Insecure* households signifies that they have started to experience a more significant disruption in their food intake. They may have reduced the quantity or quality of their meals and may need to engage in more severe coping strategies. This stage often involves compromises in dietary diversity and meal skipping due to limited resources or access to food. *Severely Food Insecure* household represent the highest stage of food insecurity wherein they experience severe disruptions in their food intake resulting in significant hunger and even starvation. These households often face extreme coping strategies, such as skipping meals for extended periods or going without food altogether. Severe food insecurity can have severe consequences for the health and well-being of individuals and families.

The results of the data analysis in the Hunza District showed that 41.6% households were classified as food secure, 5.5% were mildly food insecure, 40.9% were moderately food insecure and 12.0% were severely food insecure.

Later on, the regional disparity within the Hunza District regarding food security situation was also explored. It was observed that the incidence of food security was not uniform amongst the three regions of the Hunza District. The Table – 6 shows that the Central Hunza was the most food secure region within Hunza District wherein 44.5% households were found to be food secure in comparison with only 34.0% households in Lower Hunza and 37.4% in Upper Hunza. Similarly, Lower Hunza registered highest number of households categorized as moderately food secure.

Table - 6   Household food insecurity Access Incidence in the Hunza

Region/ Sub-regions	Food Secure (%)	Mildly Food Insecure (%)	Moderately Food Insecure (%)	Severely Food Insecure (%)
Hunza District	41.6	5.5	40.9	12.0
Central Hunza	44.5	6.1	35.6	13.7

Upper Hunza	37.4	4.4	48.2	10.7
Lower Hunza	34.0	4.4	55.9	5.2

8   Conclusion

It is concluded as a result of instant study that the HFIAS is a valid and consistent instrument for assessing the frequency and reliability of food accessibility in the Hunza. This conclusion is in line with other similar studies conducted in different countries which found HFIAS as a reliable tool to measure food accessibility e.g. in Iran, Tanzania and Lebanon (Salarkia, et. al., 2014; Knueppel, et. al., 2010; Naja, et. al., 2015).

The situation of food security was quite worse in the Hunza. People faced a lot of anxiety and uncertainty about food insecurity (85% households had such concerns). Similarly, people were highly concerned about quality and quantity of food they consumed (91.2 % households compromised on quality and 86.2% on quantity of food consumed Such findings appeared to be broadly in consonant with the findings of National Nutritional Survey of Pakistan conducted in 2018 (NNS, 2018). According to this survey, Gilgit Baltistan had the 2nd highest rate of stunting in the country i.e. 46.6%.).

Further, it was observed that 41.6% households were food secure and 40.9% was moderately food insecure in the Hunza which was quite different from the findings of Nutritional Survey of Pakistan 2018. As per this survey, Gilgit Baltistan was assessed to have 75.6% population as food secure and only 7.5% as moderately food insecure. These findings may help for policy makers to develop better food security policy for the Hunza which appeared to hit badly during last few years.

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Effects of Instagram False Reality on Body Image among University Students of Pakistan

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Abstract

Internet, especially the advent to social media has truly revolutionized the globe, making human beings more aware and more addicted at the same time. Social networking sites have been adopted by its users with immense speed, creating borderless social communities and spreading global trends with viral effects. It has also been observed that youth, being digital natives, is more active, persistent and creative user of such platforms. Hence, they are more into tendencies of freely sharing their thoughts, acts and ideals as well as adopting what matches their opinion and feelings. Female users, according to research, have been found more effected by the social media, especially regarding body image, intra-sexual competition, body dissatisfaction and drive for thinness etc. It has been observed that body ideals cultivate distress and dissatisfaction among female users of social media. The apps and tools of photo editing and makeup filters further aggravated the effects of photo activity on social media. Instagram, as one of the leading social networking site, has multiple such tools to craft false realities by editing photos. Such false realities have potential to create multiple effects on users, especially female users regarding the body image. This research, by inquiring 400 female university students of Lahore-Pakistan through a quantitative survey, intended to investigate how Instagram photo activity effects young respondents regarding body image, body dissatisfaction, intra-sexual competition and drive for thinness. The results revealed positive relationship between the use of Instagram photo activity and above said variables regarding body image.

Keywords: Instagram, Body Image, Body Dissatisfaction, Drive for Thinness, Fake Reality

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1. Introduction

Social media has revolutionized the globe by making networking and interaction more widespread and effective. Literature indicates that users especially female compare their appearance on social networking sites which leads them towards body dissatisfaction and drive for thinness. This study is based on false reality which includes picture editing and filtration on Instagram. Social media has introduced some editing and filtration tools which are commonly used by females to edit and shape their pictures by doing fake makeup and body shaping to represent them as they wish to be. Such effect of media on female's body appearance is studied vastly in social science research (Bessenoff, 2006).

According to research, girls use various types of media to satisfy their needs of learning about beauty products and standards and about physical appearance (Heinberg, Altabe, & Tantleff-Dunn, 1999). Previous studies concluded that social media messages affect females which lead them to body dissatisfaction and drive for thinness (Groesz, Levine & Murnen, 2002). Users of social media, includes celebrities manipulate the pictures which shows unrealistic body and weight (Grabe, Hyde, & Ward, 2008). In previous studies women declare that they are pressurized by social media regarding their body weight and appearance (Lally, 2007). Female users of Instagram compare themselves with other member's pictures and videos. This led them to a world of negativity i.e body dissatisfaction, unhealthy lifestyle, and intra-sexual competitiveness for mates and eating disorder to become thinner.

Present study indicates the importance of Instagram on which female users use photo manipulation tools to look better than other friends and users. This study includes young girls who share their images on social networking sites to show that they have ideal body. This race leads young girls towards negativity, which involve overthinking on their body appearance and intra-sexual competitiveness of mates.

The purpose of the study is to examine how Instagram photo activity of young female affect their body image and how it creates body dissatisfaction; and how they drive themselves for thinness. This study also indicates how Instagram photo activity creates intra sexual competition with their friends and family for their mates. This study primarily focuses on how social media (Instagram) affect female body image which leads them to body dissatisfaction and drive for thinness.

1.1 Research Questions

RQ1: How Instagram Photo Activity, appearance related comparison, Intra-sexual competition, body dissatisfaction and drive for thinness are significantly related?

RQ2: How Instagram photo activity is a significant predictor of body dissatisfaction among Pakistani female students?

RQ3: How Appearance related comparison on social networking sites is a significant predictor of intra-sexual competition among female university students?

RQ4: How Appearance related social comparison on Instagram is a significant predictor of drive for thinness among female students?

1.2 Hypothesis

H₁ There is significant relationship between Instagram Photo Activity, appearance related comparison, Intra-sexual competition, body dissatisfaction and drive for thinness.

H₂ Instagram photo activity is a significant predictor of body dissatisfaction among Pakistani female students.

H₃ Appearance related comparison on social networking sites is a significant predictor of intra-sexual competition among female university students.

H₄ Appearance related social comparison on Instagram is a significant predictor of drive for thinness among female students.

2. Theoretical Framework

Social Comparison Theory as theoretical framework gives life to this research by making the concepts under this study more understandable and meaningful (Adom & Hussein, 2018; Imenda, 2014).

In 1954, Leon Festinger published the first document on Social Comparison Theory. Festinger proposed that people evaluate themselves in comparison to others. People judge their own self on the basis of social comparison or analyzing the self in relation with others. People set up a standard level on which they evaluate their selves (Festinger, 1980). For example in a classroom student might compare herself with the toper of the class. If she finds that her abilities and score is not on the level of toper, she might concentrate more on her studies and improve her abilities (Miller & et al, 2015).

Festinger mentioned following hypothesis of social comparison theory in his book 'Social Comparison Processes'.

i. There exist, in the human organism, a drive to evaluate his opinions and abilities.

ii. To the extent that objective, non-social means are not available, people evaluate their opinions and abilities by comparison respectively with the opinions and abilities of others.

iii. The tendency to compare oneself with some other specific person decreases as the difference between his opinion or ability and one's own increases.

iv. There is a unidirectional drive upward in the case of abilities which is largely absent in opinions.

v. There are non-social restraints which make it difficult or even impossible to change one's ability. These non-social restraints are largely absent from opinions.

According to this theory people compare themselves with other people, who are similar to them and have similar abilities. Comparison is more authentic when the target person's age gender and abilities are same.

According to Festinger's theory of social comparison there are two types of social comparison.

i. When a person compare with the other person who is better than him/her is known as upward comparison. Upward comparison occurs when there is a desire to improve oneself.

ii. Downward comparison occurs when a person compares himself with the person who is worse than him. It occurs when a person realize his abilities are better than others.

There are numerous theories which explain the negative effects of media on body image. Social comparison theory is most applicable theory regarding effect of media on body image (Groesz et al., 2002; Crowther & Myers, 2009). This theory states that people compare their opinions and abilities with other abilities, attitudes and opinions (Festinger, 1954). Comparison exists in two ways, upward comparison and downward comparison.

Appearance related comparison on Instagram evaluates being attractive and thinner (Groesz et al., 2002). When a woman compares themselves with thinner model or women it directly leads them towards body dissatisfaction. This comparison on Instagram motivates females to do dieting and cosmetic surgeries to achieve ideal body image. Previous studies have shown that appearance comparison on social media leaves negative effects, including lower self-esteem, eating disorder and body dissatisfaction (Cachelin & Regan, 2006; Herman & Polivy, 2002). On social networking site, when a women compare her profile with other women who is thinner than her develop greater level of body dissatisfaction.

Some people especially females idealized other users (may be celebrities) and want to become like them. This comparison on social media negatively effects female towards body dissatisfaction. Literature shows that female usually make upward comparison rather than downward comparison in their daily lives (Leahey & Crowther, 2008; Crowther, & Ciesla, 2011). The literature also reveals that appearance comparison on Instagram develops intra-sexual competition and body dissatisfaction among female students of Pakistan. Most of the females are suffering from upward social comparison because they want to become like others who have better body image.

3. Review of Literature

3.1 Social Media, Female Body Image and Body Dissatisfaction

Today, social media is very popular among every age group of people. Instagram is one of the popular social networking site among youth and this social networking site allows users to share pictures with a lot of features of picture editing, photo manipulation and filters. Research studies reveal that the females believed being more concerned about their weight and health than non-users of Instagram. In United States female students at high school are more conscious about their appearances in school than other non-users of Instagram (Gray & Meier, 2014). According to Tiggemann & Miller female who spend more time on social media are more dissatisfied from their body image. Body image is a self-body attitude or feeling towards your own body especially body shape, weight and appearance. This feeling and behavior may affect negatively or positively to the person (Bailey et al, 2015).

In an experimental study researcher give pictures of three types of model to participants (Groesz, Levine, & Murnen, 2002). Thin body women, over size women and normal size women pictures were distributed to measure how much women feel dissatisfied from their bodies. In these experimental studies this concluded that women are very much concerned about their bodies after watching thin females (Hendrickse, Secharan, & Clayton, 2016). According to research, magazines are most common source which creates body dissatisfaction among youth. 'Body dissatisfaction is the negative

thoughts about your own body which create negative effects, depression, eating disorder and dissatisfaction (Dittmar 2005). 47% women read magazines for fashion tips and beauty which leads them to body dissatisfaction. Because of reading magazines researchers indicated that magazines are responsible for developing dissatisfaction females.

Berg et al (2007) found out that there is no relationship between media and body dissatisfaction among males. One the other side females who are suffering from body image issues are directly affected by media. Holmstrom (2004) conducted a meta-analysis on previous literature based on body dissatisfaction, eating disorder and body images issues. Holmstrom selected 34 studies in which media was independent variable and body dissatisfaction, body image and disorders are dependent variable. He concluded that female feel satisfied about their bodies after viewing heavy body images and they are not changing they lifestyle and appearance after viewing thin bodies. Halliwell and Dittmar (2004) presented some advertisements of models and no model pictures. They instructed the participants to make comparisons of their appearance with the body shown in the pictures. They examined that those participants who viewed thin model advertisements are suffering from body image issues than those who viewed normal commercials. Similarly Lin & Kulik (2002) concluded that body dissatisfaction is among those participants who viewed thin peer, then those who viewed nothing. Ahadzadeh and Sharif (2017) also concluded that Instagram usage is directly associated with body dissatisfaction and low self-esteem. In an experimental study participant showed images of celebrities and unknown images of groups from public profiles of Instagram. It is concluded that people are more exposed to thin model images (Brown, Tiggemann, 2016). The effect of traditional media images on female body image is studied 1980's (Grabe et al., 2008; Want, 2009).

3.2 Social Media, Appearance Comparison, Intra-Sexual Competition and Drive for Thinness

Female usually compare their appearance with other members on social media. A recent study investigates the appearance related comparison on Facebook. Researchers select those participants who owned their Facebook accounts and use magazines websites. The researcher concluded that people who use magazines websites are very much concerned about their appearance and those who use Facebook are mostly concerned about their face beauty, skin and hair (Fardouly et al., 2015). In 2004 Hawkins, Richards, Granley & Stein conducted a research in which they reported that images of thin models create body dissatisfaction among females. In America a report was published on 'ethics of photo editing (Brandeis University, 2012). Thin model images are also used to attract male audience. During a research male participants were showed images of different women of different shape light and heavier. Most of them rate thin female images more attractive (Wilson, Tripp and Boland, 2005). Leahey and Crowther (2008) conducted research on upward and downward appearance. In the research they ask participants to fill out questionnaires about appearance comparisons they face in their daily lives. This research concluded that women who face upward appearance comparison are facing negative effects in their lives. Ritchins (1991) found that 50 percent

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of women compare their bodies with models which are shown in the advertisements, and he also declared that advertisements forced women to hate their bodies.

Fisher and Cox (2011) performed qualitative research in which they asked participants to list down all the tactics they do for mate attention. The results showed that the majority of tactics were those related to self-promotion, followed by mate manipulation. After qualitative research Fisher and Cox (2011) conducted quantitative research on these tactics to check that how much people use this behavior in their life. They concluded that self-promotion is the most significant tactics used by women during intra-sexual competition. Self-promotion is related to self-improvement. It means person improve their image in front of their mate (Cox, Fisher & Gordon, 2009). Intersexual competition is higher in females as compared to males (Payne, 1979). Females are more possessive than males when making mating decisions (Symons, 1980; Buss, 1995). Literature shows that women compete, but in a different way than men (Goor & Solano, 2010). Both male and females are involved in intra-sexual competition, both sexes are aggressive, but they show it differently (Bettencourt & Kernahan, 1997; Björkqvist, Lagerspetz, & Kaukiainen, 1992). According to Calpan's (2005) research, women get pressurized to behave nice, good, and helpful, to look attractive and never get rude. Strikwerda (1992) examined that male compete to get reward and women compete for male attention.

According to American media research popular TV programs which shows that thin body women are more beautiful, popular and successful (Tiggemann & Hargreaves, 2003). This is the reason that ordinary women want to be thin and successful (Forbes et al, 2oo7).

Hendricks (2002) conducted research on traditional media prime time. In which he examined that every comedy show involved a heavy overweight female which are teased by the others. In the end of the show overweight stressed women lost her weight and become more successful and confident. Harrison and Hefner (2006) found that female who use traditional media are suffering from eating disorder and planning for thinner body in future. During a research Stice and Bearman (2001) find out that females who are going through body image issues and lack of social support are more pressurized to become thin. During an experimental research, Tiggemann and McGill (2004) selected female students and give them pictures of thin model body parts and some neutral advertisements without models. They examined that females who viewed model pictures are more dissatisfied from their appearance as compared to other neutral advertisements.

Harrison et al (2006) conducted content analysis on comedy dialogues which are used in dramas. They examined that female who are overweight in dramas received negative comments on their body shape and figure in a sense of humor. On the other hand thin body female received beautiful comments by the male character. This study also concluded that these dramas directly affect women who are suffering from body dissatisfaction. During a meta-analysis Strasburger (1995) found from twenty experimental studies that the higher exposure of thin models increased negative feelings among young woman regarding their bodies.

Keeping in view the literature mentioned above, the present study considers the case of Pakistan, not comprehensively researched before, to investigate how Instagram false realities push young university female students of Lahore for body image comparison, body dissatisfaction, intra-sexual competition and drive for thinness. It will attempt to add the case of Pakistan to the existing literature on the subject and reveal the tendencies of young female university students in the domains before said.

4. Method

The method employed for data collection regarding the above-mentioned research questions is quantitative survey. It has collected data through a static questionnaire for the whole sampled respondents. For this study, female of Pakistan age 18 to 28 are being taken as the universe, while female age 18 to 24 of different universities of Lahore are regarded as population for conducting the survey. A sample of 400 females was considered for this study. The sample has been extracted from the following universities of Lahore-Punjab.

  i.   University of Management and Technology (UMT)
 ii.   Kinnaird College for Women Lahore (KC)
iii.   Lahore School of Economics (LSE).
 iv.   University of South Asia (USA)

The researchers have drawn 100 female respondents from each university. The reason behind selecting these universities was convenience for the researchers to approach them for data collection. The researchers have used 'purposive sampling'. "A purposive sample is a non-probability sample that is selected based on characteristics of a population and the objective of the study" (Crossman, 2018).

Closed-ended questionnaire was formulated for collecting the data from respondents. Keeping in view the objectives of the study, 5 points Likert Scale has been used to get information from the respondents, where 1 mean strongly disagree and 5 means strongly agree. The obtained quantitative data has been analyzed with SPSS to statistically test the stated hypothesis.

5. Results

5.1 Results of Research Questions

Four research questions were formulated for this research, which yielded the following results:

5.1.1 How Instagram Photo Activity, appearance related comparison, Intra-sexual competition, body dissatisfaction and drive for thinness are significantly related?

Instagram is one of the popular website which allows users to post pictures and videos. Based on previous studies, Instagram photo activity, appearance comparison, intra-sexual competition, body dissatisfaction and drive for thinness are significantly related. That means, when Instagram photo activity increases, appearance comparison will also increase. Same as, when appearance comparisons on Instagram increase intra-sexual comparison will also increase. On the other side the result of the study shows that body dissatisfaction does not increase with Instagram photo activity. Results of the study showed that Instagram photo activity is significantly positively related to appearance

comparison and drive for thinness. Previous studies also show that usage of social media creates negative effect on female behavior. If media activity is increased, appearance comparison and low self-esteem is also increased (Mehdizadeh, 2010; Steinfield, Ellison & Lampe, 2008). Female users who want to have an ideal body and to become popular, they drive themselves for thinness and various cosmetic surgeries (Tanis & Vermeulen, 2012).

On the other side results of this study show that Instagram photo activity is significantly negatively related to body dissatisfaction and intra-sexual competition. Recently, a study conducted on Instagram including 195 female participants exposed that viewing ideal body images does not create body dissatisfaction. The results showed that female users on Instagram are not dissatisfied, rather, they feel positive and satisfied from their body appearance (Cohen, Fardouly & John 2019). Results of our study also shows that most of the female users are not dissatisfied. A research, conducted in Netherlands and Canada, on intra-sexual competition and its differences resulted that intra-sexual competition is increased and become stronger (Bunnk, 2011). On the other hand, our research resulted that 248 female users agree that they buy attractive clothes and maintain their bodies to attract males but somehow, they didn't agree on that appearance comparison develops intra-sexual competition for mates.

5.1.2 How Instagram photo activity is a significant predictor of body dissatisfaction among Pakistani female students?

The use of social media is growing rapidly, especially after 2002. This is also declared that social media is mostly used by young boys and girls (Pew, 2015). This study is based on Instagram that how it affects female body image. To get the results, participants were asked some questions based on their daily routine of Instagram photo activity. 54% respondents agree that they check other's users profile, and 26% respondents strongly agree with it. 234 respondents agree that they like photos and videos of other friends. However 248 respondents strongly agree that they compare their bellies with other friends on Instagram. 62% respondents agree that their body parts are huge than other friends. 154 respondents were found not satisfied with their bodies. Females who are suffering from body image issues are directly affected by Instagram.

5.1.3 How Appearance related comparison on social networking sites is a significant predictor of intra-sexual competition among female university students?

Darwin (1871) realized that male or female compete with same gender for opposite gender attention. The results of the study show that 236 respondents compare their lives with others, and they also agree that they compare their achievements with other users on social networking sites. 82% respondents agree that they compare their physical appearance with other users on Instagram. However 84% respondents agreed to it that if they look skinner, they will more attractive to men and 79% respondents disagree with it. 68% respondents agree that they keep their bodies fit than other females to save their partners from others. 75% respondents agreed that they buy beautiful clothes to impress their partners and 234 respondents said that they don't bother opinion of other women. Female users on Instagram compare their appearance with other users which increase

intra sexual competition among university students. 233 respondents strongly agree that romantic partner is more important to them.

5.1.4 How Appearance related social comparison on Instagram is a significant predictor of drive for thinness among female students?

From 400 respondents 233 respondents did not like the shape of their bodies. 224/400 respondents want to look perfect and ideal same like their social media friends. 241 Respondents agree that they exaggerate or magnify the importance of weight, after using social media and 68 respondents disagree to it. 62% respondents were found afraid of gaining weight after using social networking sites. 229/400 respondents agreed that if they gain a pound, they will keep gaining it. 157/400 respondents disagree that they eat sweets and carbohydrates without feeling nervous. Many female users of Instagram compare their bodies with other users and drive their own bodies for thinness. 179/400 respondents agreed that they think about dieting after using Instagram.249/400 respondents strongly agreed that they feel extremely guilty after overeating.

5.2 Results of Hypotheses

Following are the results of hypotheses.

H$_1$: There is significant relationship between Instagram Photo Activity, appearance related comparison, Intra-sexual competition, body dissatisfaction and drive for thinness.

Table 1: Pearson correlation Score (N=400)

Variables	1	2	3	4	5
1. Instagram Photo-activity	1	.285**	-.164**	-.127*	.200**
2. Appearance Comparison	---	1	.462**	-.608**	.751**
3. Intra-sexual Comparison	---	---	1	.139**	.303**
4. Body Dissatisfaction	---	---	---	1	-.355**
5. Drive for Thinness	---	---	---	---	1

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between photo activity, appearance comparison, intrasexual competition, body dissatisfaction and drive for thinness (as measured by the self-administered scale) and Perce (as measured by the Perceived Stress Scale) was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There is a significant positive relationship between Instagram Photo Activity and appearance related comparison, r (398) = .285, p < .05. There is a significant negative relationship between Instagram photo activity with intra sexual competition, r (398) = -.164, p <.05.

There is a significant negative relationship between Instagram photo activity with body dissatisfaction, r (398) = -.127, p <.05 and there is a significant positive relationship between Instagram photo activity with drive for thinness, r (398) = .200, p <.05.

H₂: Instagram photo activity is a significant predictor of body dissatisfaction among Pakistani female students.

To examine the result of Instagram photo activity on body dissatisfaction simple linear regression is applied.

Table 2: Simple Linear Regression Analysis for Students Body Dissatisfaction Score (N=400)

Predictor	B	SE(B)	β	t	Sig. (p)
Constant	30.164	.869			
Instagram Photo Activity	-.110	.043	-.127	-2.559	.011

Note.
R^2=.016

A simple linear regression analysis was conducted with body dissatisfaction as the criterion variable and Instagram photo activity as the predictor. Instagram photo activity is a significant predictor of body dissatisfaction, $β$ = -.127, t (-2.559) = 0.11, p < .05, and accounted for 1.6% (R^2=.016) of the variance in body dissatisfaction scores.

H₃: Appearance related comparison on social networking sites is a significant predictor of intra-sexual competition among female university students.

Simple linear regression is used to examine that appearance comparison on Instagram is significant predictor of intra sexual competition among female university students.

Table 3: Simple Linear Regression Analysis for Students Intra-sexual Competition Score (N=400)

Predictor	B	SE(B)	β	t	Sig. (p)
Constant	20.972	.618			
Appearance Comparison	.119	.011	.462	10.401	.000

Note.
R^2=.214

Simple linear Regression analysis was conducted with intrasexual competition among females as the criterion variable and appearance related comparison on Instagram as the predictor. Appearance related comparison on social networking sites is a significant predictor of intrasexual competition among female university students, $β$ = .462, t (10.401) = .000, p < .05, and accounted for 21.4% (R^2=.214) of the variance in intra-sexual competition scores.

H₄: Appearance related social comparison on Instagram is a significant predictor of drive for thinness among female students.

Table 4: Simple Linear Regression Analysis for Students Drive for thinness Score (N=400)

Predictor	B	SE(B)	β	t	Sig. (p)
Constant	-14.716	1.848			

| Appearance Comparison | .776 | .034 | .751 | 22.713 | .000 |

Note. R^2=.565

Simple linear Regression analysis was conducted with drive for thinness among females as the criterion variable and appearance related comparison on Instagram as the predictor. Appearance related social comparison on Instagram is a significant predictor of drive for thinness among female students, B = .751, t (22.713) = .000, p < .05, and accounted for 56.5% (R^2=.565) of the variance in drive for thinness scores.

6. Conclusion

Social networking sites are growing rapidly. Facebook, Instagram and Snapchat are very common social media which allow users to share their images and life happenings. Through these social networking sites, people interact with each other and somehow, they compare their life and appearance with other users. Appearance related comparisons on social media is increasing day by day. Women who use Facebook and have their personal profiles on social media are not satisfied from their appearance (Stronge et al, 2015). Literature indicates that female users mostly compare their appearance with other users on Instagram. Female users compare their appearance with other female images.

The results of this study show that 236/400 respondents compare their lives with others and also agreed that they compare their achievements with other users on social networking sites. 82% respondents agreed that they compare their physical appearance with other users on Instagram. The results show that appearance comparison on Instagram is significantly related to body dissatisfaction, intra-sexual competition and drive for thinness. When Instagram photo activity increases, appearance comparison also increases.

The results also showed that intra-sexual competition is associated with appearance comparison. 68 % respondents agreed to it that if they look skinny, they will be more attractive to men, which shows that female who are suffering from body dissatisfaction are also involved in intra sexual competition. The results indicated that females who compare their bodies with other on Instagram are more engaged in body dissatisfaction and drive for thinness.

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Violations Of International Humanitarian Law: A Case Study Of Israel-Gaza Conflict

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Abstract

International Humanitarian Law (IHL) considers as a foundation for regulating armed conflicts and safeguarding the rights of individuals affected by such conflicts. Despite its worldwide recognition, its application in various contentious circumstances, particularly exemplified by the Israel-Gaza conflict, remains a subject of intense discussion. Employing a qualitative research design, this paper explores the nuances of the Israel-Gaza dispute. It meticulously highlights numerous violations of IHL, encompassing breaches of its fundamental principles, including distinction, proportionality, neutrality, and humanity. These violations, attributed to both the Israeli Defence Forces and Hamas, underscore the formidable challenges in maintaining ethical and legal standards amidst ongoing warfare. This paper stresses the critical importance of addressing IHL violations within the Israel-Gaza conflict. It demands for accountability, ethical conduct, and genuine efforts toward peace and reconciliation. This article urges sustained actions for a lasting solution, highlighting the principal importance of adhering to IHL principles to guarantee long-term peace in the region. In addition, it accentuates the significance of international cooperation and support in fostering compliance with IHL and promoting a culture of respect for humanitarian norms. The paper stresses the need for impartial investigations into alleged violations of IHL and the prosecution of those responsible. It also calls for actions to increase the protection of civilians and humanitarian workers in conflict zones. By promoting adherence to IHL, this paper maintains, the international community can play a pivotal role in mitigating the humanitarian impact of armed conflicts and advancing the cause of peace and justice.

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1.   Introduction

International Humanitarian Law (IHL), commonly known as the Law of Armed Conflict, regulates the conduct of armed conflicts and protect those who are not or no longer involved in conflict. IHL has evolved through several decades, including significant milestones such as the foundation of the Red Cross in 1864 and the adoption of the Geneva Conventions in 1864 and 1949. Additional Protocols, developed in 1977, increased rights for victims of both international and non-international armed conflicts. The fundamental principles of IHL include distinction (distinguishing between civilians and combatants), proportionality (ensuring that military actions are proportionate to objectives), neutrality (parties not involved in conflict should not be targeted), and humanity (requiring humane treatment of all individuals). The Geneva Conventions and Additional Protocols provide regulations to protect the wounded, ill, and prisoners of war, and it emphasizes on non-discrimination. IHL supports the protection of civilians, limits the means and techniques of combat, and compels parties to take preventive steps while also establishing an accountability framework to hold violators responsible. However, despite global acceptability, IHL's application remains controversial, particularly in the ongoing Israeli-Gaza conflict.

The Israel-Gaza conflict has deep historical roots and diverse origins, spanning over years of events and changes. Israel's defence forces have flagrantly broken all principles of international law during the last 76 years and never held accountable. Recently, the events of October 7, 2023, and Israel's brutal reaction have refocused attention on the application of IHL, which has always been challenging.

This research paper delves deeply into the violations of International Humanitarian Law (IHL) committed during the Israel-Gaza conflict. The purpose of this article is to examine the hostilities conducted and the protection of people during the conflict. Using a qualitative research design, the paper explores the subtle aspects of the Israel-Gaza war, relying on both secondary and primary data sources. International Humanitarian Law serves as the conceptual framework for this study, which explains the violations of international law in the Israel-Gaza conflict. These violations are studied in light of both Israel's and Gaza's actions, illustrating the complexities and problems of maintaining ethical and legal principles in the midst of ongoing conflict. This article further emphasizes the need of addressing violations of IHL in the Israel-Gaza conflict, as well as the need for accountability, ethical conduct, and genuine efforts for peace and to bring sustainable resolution of the conflict. However, as Israel – Gaza is an ongoing

conflict this paper covers statistical data of causalities from October 7th, 2023 till April, 2024.

2.   International Humanitarian Law

IHL is a set of norms and principles governing the conduct of armed conflicts. The main aim of IHL is to reduce human suffering caused by wars and conflicts by controlling belligerent behaviour and safeguarding individuals who do not or no longer participate in hostilities. The origins of IHL can be traced back to ancient civilizations and religious ideologies, where specific regulations and norms attempted to restrict the savagery of battle.

However, the present framework of IHL began to emerge in the nineteenth century, particularly by the efforts of Henry Dunant, who experienced the horrors of the Battle of Solferino in 1859. Dunant's advocacy resulted in the formation of the International Committee of the Red Cross (ICRC) and the acceptance of the first Geneva Convention in 1864, which sought to safeguard wounded troops on the battlefield (Inter-Agency Standing Committee, 2010).

2.1   Key Principles of IHL

a.   **Principle of Distinction.**   The principle of Distinction is the foundation of IHL. It emphases the need to distinguish between the combatants of war and the civilians, as well as between military based areas and civilian areas. According to the principle of distinction belligerents are compelled to direct their actions solely against military and to avoid civilian casualties (ICRC).

b.   **Principle of Proportionality**.   Proportionality principle dictates that the during the conflict the use of force must be proportionate to the military targets and objective being pursued. It prohibits excessive or indiscriminate attacks against civilians or civilian objects disproportionate to the expected military advantage. This principle aims to balance military necessity with humanitarian considerations (ICRC). Moreover, this principle says that in situations where unintentional harm to civilians or civilian objects is unavoidable, the principle of proportionality applies. This means that individuals responsible for planning or authorizing an attack must abstain from initiating or must halt an attack if it is likely to result in excessive damage to civilians or civilian objects compared to the anticipated military advantage.

c. **Principle of Neutrality**.   The principle of neutrality recognizes the status of individuals and entities that do not participate in hostilities, such as humanitarian organizations and medical personnel. It mandates that these entities should be respected and protected by belligerents and should not be targeted or subjected to harm during armed conflicts.

d. **Principle of Humanity**.   Humanity principle emphasises the humane treatment of all individuals who are not or are no longer participating in conflicts, including civilians and captured combatants. It prohibits acts of violence, cruelty, and torture, emphasizing the need to protect the inherent dignity of every person, even during the armed conflict (Shaw, 2021).

IHL also have few following components and instruments to protect innocents during wartime

a.   **Geneva Conventions.**   The Geneva Conventions work as a foundation of IHL system that enacted from 1864 and eventually came to an end in 1949 and it's made up of a set of four Conventions. The primacy of their charters is to outline and secure the right of the wounded, sick, ship wrecked persons, prisoners, and civilians during wartime. The treaties transcribe legal norms associated with the treatment of people who fall into these categories and they also oblige nations to comply with those norms.

b.   **Additional Protocols.**   Geneva Convention's Additional Protocols were adopted in 1977 which has further strengthened and expanded the protection of victims of armed conflicts. From the Additional Protocols, Protocol I emphasis the protection of civilians particularly in International armed conflict, whereas Protocol II talks about the protection of civilians in specifically non-international armed conflicts.

c.   **Customary International Humanitarian Law.** The Customary International Humanitarian Law encompasses practices and rules that have developed over time and are widely recognized as binding on all states, notwithstanding of whether they are parties to specific treaties. The International Committee of Red Cross (ICRC) along with various other legal scholars have played an important role in recognising and codifying customary rules of IHL (Shaw, 2021).

d.   **International Criminal Court (ICC).**   Establishment of International Criminal Court in 2002 marked a significant step in ensuring accountability for serious violations of IHL. The ICC has jurisdiction over individuals accused of genocide, war crimes, crimes against humanity, and the crime of aggression. Its role is to prosecute those responsible for the most severe breaches of IHL (Shaw, 2021).

2.2   Sources of IHL

Key instruments of Modern IHL documents include
- The Hague Regulations, which governs the laws and customs of land warfare.
- The Geneva Convention (I), aiming at improving the condition of wounded and sick military personnel in the field.
- The Geneva Convention (II), aims at improving the conditions of wounded, sick, and shipwrecked armed forces members at sea.
- The Geneva Convention (III) on the Treatment of POW.
- The Geneva Convention (IV) protects civilians during wartime.
- Protocol I and protocol II addresses the protection of victims of international armed conflicts and non-international armed conflict, significantly.

3.   Historical Background of Israel-Gaza Conflict

The deeply rooted and diverse Israel-Gaza conflict is a result of a complex interaction of historical, political, religious, and territorial disagreements between Israelis and Palestinians. The roots of the conflict may be traced back to the late nineteenth and early twentieth centuries, when major Jewish immigration to Palestine began as part of the Zionist movement, which an aim to build a Jewish homeland in the territory, ruled by the Ottomans. The influx of Jewish settlers heightened tensions with the Arab population, which resulted in growing clashes and competing national aspiration. However, the 1917's Balfour Declaration is vital to understanding the historical context of the Israel-Gaza conflict.

The Belfour declaration was issued by the British government during World War I, the declaration expressed support for the establishment of a "national home for the Jewish people" in Palestine. This declaration was a pivotal step in the Zionist movement, which has provided international recognition and legitimacy to Jewish objectives for statehood in Palestine (Elmali, 2023).

Moreover, the declaration had laid the groundwork for the establishment of the State of Israel in 1948 and contributed to the escalation of conflict between Jews and

Arabs. The united nation's proposal for a partition, in 1947, aimed to divide Palestine into two separate states for Jews and Arabs, with Jerusalem as an international zone. This plan was widely accepted by the Jews, whereas, the Arab leaders rejected it. This led to armed conflict and the establishment of the State of Israel in 1948.

Soon after the establishment of Israel, the First Arab-Israeli War triggered, with neighbouring Arab states, including Egypt, Jordan, Syria, and Iraq. Israel emerged victorious from the conflict, which led to the displacement of hundreds of thousands of Palestinians. The armistice agreements, after that, left Gaza under Egyptian control and the West Bank under Jordanian control. This was followed by the Six-Day War in 1967 initiated by Israel in a pre-emptive strike on Egyptian air forces (Elmali, 2023). Israel swiftly defeated the combined forces of Egypt, Jordan, and Syria, occupying the Sinai Peninsula, Gaza Strip, West Bank, and Golan Heights. The geopolitical landscape of the region got significantly altered after this victory and led to Israel's military occupation of Gaza and the West Bank.

The Yom Kippur War was another war between Israel and Arab states, fought in 1973, It started with a surprise strike on Israel around Yom Kippur and Ramadan. Despite initial Arab gains, Israel finally repelled the attacks. The war ended with a cease-fire and no significant territorial changes, but it had long-term consequences for the area, instigated changes in military policies and diplomatic efforts to resolve the Arab-Israeli conflict.

Following all the full-scale Wars, Israel began constructing settlements in the occupied territories, including Gaza, that are considered illegal by the International Law. However, throughout the history, various efforts has also been done to address the conflict through peace negotiations, such as the Oslo Accords in the 1990s, aimed to establish a framework for peace between Israel and the Palestinians, leading to limited Palestinian self-governance in parts of the West Bank and Gaza. However, the peace process faced numerous complications, including continued violence and conflict escalation (Elmali, 2023).

3.1   Rise of Hamas in Gaza

The rise of Hamas, a militant Islamist organization, further complicated efforts for peace, as it won Palestinian legislative elections in 2006 and subsequently seized control of Gaza in 2007 (Robinson, 2024). This led to a political and territorial split between Hamas in Gaza and Fatah in the West Bank, exacerbating internal Palestinian divisions and contributing to conflict escalation. Periodic flare-ups of violence, including major

conflicts, as Operation Cast Lead in 2008-2009, Operation Pillar of Defense in 2012, and Operation Protective Edge in 2014, have resulted in extensive casualties, destruction, and international condemnation. Despite occasional ceasefire agreements and international mediation efforts, the underlying issues fuelling the Israel-Gaza conflict, including the blockade on Gaza and status of Palestinian territories, remain unresolved, posing significant challenges to peace and stability in the region. The underlying grievances and political dynamics fuelling the Israel-Hamas conflict remain unresolved, posing significant obstacles to achieving lasting peace in the region (Robinson, 2024).

3.2   Recent Developments

On October 7, 2023 Al-Qassam Brigades of Hamas executed armed assaults on Southern Regions of Israel, which were the Palestinian territories occupied by Israel, along with Jerusalem and several Israeli municipalities. Operation Al-Aqsa Flood, resulted in over 1,400 fatalities and the seizure of around 240 hostages by Hamas. In response, the Israeli air force conducted airstrikes on Gaza approximately three hours after the attacks, indicating a profound shock within Israel (Elmali, 2023). Benjamin Netanyahu, the Prime Minister of Israel has declared a state of war, while Yoav Gallant, the defence minister, announced plans for a comprehensive blockade on the Gaza Strip, encompassing the withholding of electricity, fuel, and food supplies, citing the necessity to counteract what he referred to as "human animals" (Aljazeera, Israeli Defence Minister orders 'Complete Siege' on Gaza, 2023).

Despite Israel's initial claims of acting in self-defence, its military campaign quickly escalated into a wide-ranging and merciless operation, resulting in the indiscriminate bombing of residential areas and civilian infrastructure in Gaza. This ongoing Israeli offensive has resulted in the deaths and injuries of thousands of innocent civilians, prompting a critical examination in accordance with International Law, particularly IHL

4.   Classification of conflict under International Law:

Classification of Israel-Gaza conflict as international Armed Conflict (IAC) or Non-International Armed Conflict (NIAC) according to Law of Armed Conflicts is important in order to determine the legal regime for protection of individuals and accountability for those who violate IHL under International Criminal Law (ICL).

4.1   International Armed Conflict (IAC).   As per the guidelines outlined in Article 2 of Geneva Conventions of 1949 and subsequent Additional Protocols, the

characterization of a conflict as an IAC is based on the engagement of two or more states in the conflict (Solis, 2016). This means a conflict can be classified as IAC if,

4.1.1 It involves two or more states directly in hostilities or

4.1.2 It is meeting the criteria of "armed conflict" as defined in IHL which typically involves the use of armed forces.

4.2 Non-International Armed Conflict (NIAC). Article 3 of Geneva Conventions applies to NIACs that occur within the territory of a country (Solis, 2016). These conflicts typically involve a government facing opposition from internal groups, rather than a conflict between states.

5. Classification of Israel-Gaza Conflict.

It is a complicated task to determine that which branch of IHL applies to the ongoing hostilities in Gaza between the Israeli armed forces and Hamas military wing, either the law governing IAC or NIAC. However, an assumption can be made, to classify current Israel Gaza Conflict as IAC, based on the following reasons:

5.1 **Occupation Status**. Even though Israeli troops has withdrawn from the ground, but it still maintains control over many aspects of Gaza, including borders, airspace, and territorial waters. This continued control suggests an ongoing occupation (Baldwin, 2023).

5.2 **Geographical Proximity**. The geographical proximity between two territories, allows Israeli authorities to exercise governmental functions from outside Gaza, further indicating a state of occupation.

5.3 **Control and Authority**. Israel's control over Gaza and its ability to potentially re-establish full control within a reasonable time frame suggest a level of authority that aligns with the criteria for an IAC.

5.4 **Legal Implications**. Designating the conflict as an international armed conflict reinforces legal protections for individuals and objects affected by the hostilities. It also enables prosecution for war crimes under the jurisdiction of ICC.

5.5 **Protection for Civilian Populations**. Categorizing the conflict as an IAC ensures that civilian populations on both sides benefit from the protections outlined in the Geneva Conventions (GC IV), including access to the ICRC for

verification of detention conditions and family reunification efforts (Baldwin, 2023).

5.6   **Prohibited Methods of Warfare**. The designation of the conflict as an international armed conflict prohibits the use of methods or means of warfare that could cause widespread, long-term, and severe damage to the natural environment, providing additional safeguards.

Regarding treatment of Hamas forces, under IAC, they may not qualify for prisoner of war (POW) status as they are not part of the regular or irregular armed forces of the Palestinian State (Hemptinne, 2023).   However, military considerations often dictate treating them as armed forces for targeting purposes, despite not formally belonging to a recognized party to the conflict. This approach may create a "hybrid category" under humanitarian law to balance humanitarian interests and military considerations effectively.

6.   Violations of IHL in Israel- Gaza Conflict

At the core of the Israel-Gaza conflict is a deeply tragic story of human suffering and continual disregard for international humanitarian law. The ongoing violence, observed with dismay by the global community, creates a path of destruction that is hard to fathom. This conflict has witnessed frequent and serious violations of the rules intended to safeguard civilians and mitigate the brutality of warfare.

Gaza is home of around 2.23 million people, with 80% being refugee's dependent on humanitarian aid. Despite its small size of 365 km², Israel exercises complete control over its land borders and 45 km-long coastlines. Since 2007, Israel has enforced a total siege on the Gaza Strip, treating it as a hostile zone. This siege, affecting sea, land and air, violates International Law and mounts to collective punishment for all Gaza people. Consequently, Israeli military has initiated six wars between 2008 and 2021, with a seventh starting on October 7th, 2023. This ongoing conflict is characterized by an unprecedented level of destruction and civilian casualties caused by the Israeli army (Fact Sheet, War on Gaza: Violations of International Humanitarian Law, 2023).

Keeping in view the above mentioned four principles of International Humanitarian Law, the Israel-Gaza conflict alleged of numerous allegations and concerns regarding violations of International Humanitarian Law (IHL).

6.1   **Violation of Principle of Distinction**.   As this principle requires that during the conflict the civilians and combatants must be distinguished, along with

civilian objects and military objectives. Both Israel and Hamas, the militant group controlling Gaza, have been accused of failing to adequately distinguish between these groups. Israel has been criticized for use of disproportionate force with "heavy and indiscriminate Weapons, ammunitions, rockets and bombs" in densely populated areas, which has led to numerous civilian casualties (Press Release, 2024). While it argues that it targets only militants and military infrastructure, reports from international organizations and human rights groups suggest that many civilian casualties have occurred. Israeli forces have openly targeted facilities which are being considered "protected" by International Law, including hospitals, schools, and places of worship. Moreover, bombing also directly targeted medical facilities, destroying ambulances, and killing of medical staff. Whereas, Hamas has been accused of launching indiscriminate rocket attacks towards Israeli population centres, without distinguishing between military targets and civilians. This violates the principle of distinction by putting civilians at risk.

6.2   Violation of Principle of Proportionality.   According to this principle, use of force must be proportionate to the military objective only and must not led to excessive civilian harm. Both parties have faced allegations of disproportionate use of force. Israel's military operations, such as airstrikes and artillery shelling, have caused significant civilian casualties and damage to civilian infrastructure. Critics argue that the scale of Israel's response often exceeds what is necessary to achieve its military objectives. Hamas's rocket attacks, while generally less destructive than Israeli airstrikes, have also been criticized for their indiscriminate nature and the disproportionate harm they cause to Israeli civilians compared to the military value of the targets.

6.3   Violation of Principle of Neutrality.   This principle requires that entities not involved in the conflict be respected and not be targeted. In the Israel-Gaza conflict, the principle of neutrality has been violated in several ways. Humanitarian organizations and medical facilities in Gaza have been damaged and destroyed in Israeli military operations. Despite the neutral status under IHL, Israeli defence forces (IDF) have targeted various medical facilities, hospitals, clinics, and laboratories where thousands of civilians sought protection and shelter. Statistics highlights that Gaza's Health system has been completely destroyed. 32 hospitals out of 36 are destroyed including two largest hospitals (Nasser Medical Complex and Gaza City's Alshifa Medical Complex) (Press

Release, 2024). Moreover, educational, cultural and religious assets of Palestinians in Gaza have also been destroyed. According to statistics, Israel has demolished 80% schools and all universities, 241 mosques entirely and 318 partially and 3 churches where civilians were having shelter were bombed (Press Release, 2024). Notwithstanding, there have been reports of Hamas using civilian infrastructure, such as schools and hospitals, for military purposes, which violates the principle of neutrality and puts civilians at risk.

6.4   Violation of Principle of Humanity.   This principle emphasizes the importance of preventing unnecessary suffering and treating all individuals with compassion and dignity. Israel has faced criticism for the blockade of Gaza, which has led to a humanitarian crisis, including shortages of food, medicine, and other essential goods. The blockade has been described by some as collective punishment, which is prohibited under IHL. Moreover, since Oct. 7, 2023, the death toll reached up to 42,510, including 38,621 civilians, 15,780 children and 10,091 women (Press Release, 2024), with 85% of Gaza's population is in internal displacement having severe shortage of food, medicines and clean water. Also, the aggression led to the forceful expulsion of 1.7 million Palestinians from the northern Gaza Strip (Staff, 2024).

7.   Analysis and Findings

By analysing the ongoing crises in Gaza, Israel and IDF are clearly accused of genocide, forceable expulsion and ethnic cleansing of Palestinians in following ways.

7.1   The Rome Statute, in Article 6, as well as the Convention on the Prevention and Punishment of the Crime of Genocide, both define **genocide** as any act committed with the objective to destroy, any particular national, ethnic, racial, or religious group. It can be killing group members, severely injure them mentally or physically, and inflicting destruction upon them either completely or partially. The killing of 42,510 Palestinians (Press Release, 2024), including destruction of Mosques, Schools, lone houses and other religious and cultural landmarks echoes the genocide in Gaza. Such statistics prompted the petition of 790 scholars and legal experts from around the world stating that the situation in Gaza amounts to genocide (Staff, 2024). "Craig Mokhiber, Director of the New York Office of the High Commissioner for Human Rights" (OHCHR), also considered that the situation in Gaza is genocide (Fact Sheet, War on Gaza: Violations of International Humanitarian Law, 2023).

7.2   Forcible expulsion, which is a crime against humanity committed through acts that entail the displacement of civilians in any civilian group targeted in a wide-spread or systematic attack, is explicitly prohibited in the "Rome Statute". According to article 8 of the Rome Statute, authorities cannot move or deport the population of a territory directly or indirectly under their occupation. In Gaza, aggression resulted in a massive wave of deportation that led to the forceful expulsion of 1.7 million Palestinians from northern Gaza to its southern point. Under Article 49 of the Fourth Geneva Convention, it is prohibited to perform forced collective or individual deportations or exchanges of protected populations in occupied areas. In a military order of around a million Palestinians (half of the population of Gaza), the Israeli army demanded them to evacuate from northern Gaza and move to its south on October 13, 2023. UNRWA directorate pointed out that number of displaces in Gaza is over 1.7 million including 400.000 living in its structures (Report U. S., 2024). Another Israeli intelligence document has also been leaked with an official plan to displace all of the Gaza city population to the Egyptian desert of Sinai, because of the established anxiety and pandemonium caused to be moved from north to south.

7.3   Ethnic cleansing encompasses a number of violations and crimes, including: killing of civilians, forced displacement, torture, attack on unarmed population, hinders humanitarian supply delivery, and very extensive property damage. International Court of Justice Resolution No. 91/2007 defines it as forcing or intimidating people to move out or stay out of a region in order to change the population's ethnicity. Actions of Israeli authorities reflect ethnic cleansing in Gaza that uses internationally banned weapons to drive Palestinians out, an intentional scheme to deal with Israel's demographic apprehensions (Report U. S., 2024).

7.4   The ongoing violations of International Humanitarian Law in Gaza have prompted calls for an impartial inquiry, particularly concerning attacks on innocent civilians, which could constitute war crimes under international law. A joint request has been received to the Prosecutor of ICC from five countries to investigate the situation in Gaza, underscoring the gravity of the allegations (Report U. S., 2024).

7.5   Accusations are also being made by Naledi Pandor, South African Foreign Minister, against Israel, alleging "the murder of children and women," and her call for the ICC to issue arrest warrants for decision-makers of Israel have stirred significant international attention. The ICC, empowered to investigate war crimes and crimes against humanity, has announced its intention to investigate the alleged war crimes committed in Gaza. Despite Israel not being a member state of the ICC, the court asserts jurisdiction over the actions of both entities, Hamas militant groups in Israel and Israeli forces in Gaza (Qamar, 2023).

7.6   International legal experts have pointed out specific violations, including deliberate attacks on civilian targets and the excessive use of force, blockade for delivery of humanitarian aid (Qamar, 2023). These actions, such as strikes on residential buildings at night without warning, raise serious concerns regarding compliance with the principles of the law of armed conflict, notably the principle of distinction and obligation of precaution to protect civilians. Moreover, currently main humanitarian issue is how to implement and sustain an aid operation in Gaza, which desperately needed. According to Human Rights Watch, "Israel has been recently accused of 'deliberately starving Gaza's population by blocking the delivery of water, food and fuel', many starving innocents lost their lives waiting for aid convoys. Statistics shows that 300,000 Palestinians are suffering from true famine (Press Release, 2024). However, these actions of Israel considered as a method of warfare that can be clearly described as a war crime (Report, 2023)."

7.7   Criticism has been levied against the ICC for perceived double standards in its handling of cases, particularly concerning accountability for Israeli officials compared to other world leaders accused of similar offenses. The continued lack of accountability for human rights violations against Palestinians, coupled with the enduring blockade of Gaza, has intensified international scrutiny and calls for justice.

7.8   Failure of ICC in prosecuting Israel for declared war crimes in Gaza, world major power is to be blamed. Despite significant pressure from UN Secretary-General Antonio Guterres, the United States, being Israel's staunchest ally, openly thwarted the adoption of a resolution on December 8. The resolution sought an "immediate humanitarian ceasefire," marking the latest instance of several US vetoes on draft resolutions concerning the ongoing conflict (Aljazeera, UN

Security Council in Intense Negotiations on Gaza Humanitarian Resolution , 2023).

7.9   The ongoing conflict in Gaza, with its devastating impact on civilians and the apparent targeting of civilian populations, underscores the urgency for the ICC to address these allegations, impartially. Failure of this not only undermine the credibility of international justice but also perpetuates freedom for grave violations of human rights and international humanitarian law in future as well.

7.10   Crimes against humanity in Israel and Palestine serve a vital role in determining the ICC's credibility. If the actors who committed the war crimes and the crimes against humanity in these regions are not held accountable, this can have a very bad impact on the reputation and credibility of the court. International collaboration will be especially important for the ICC's future reputation. Member states have to unite and denounce serious human right violations in the name of the rule of law and ensure accountability for the most severe offenses. This in turn bolster the international community's solidarity in human rights and create the second commitment to prevent and deal with cases of atrocities.

7.11   The Israel-Gaza conflict raises question marks to effectiveness of IHL warranting a careful re-evaluation of the concepts of humanity, distinction, and proportionality. The actions of powerful international actors, such as the US, EU and other pro-Israel lobbies, in supporting Israel despite alleged war crimes points to inconsistent and selective application of IHL.

7.12   Analysis of aforesaid echo that the Israel-Gaza conflict presents numerous challenges to IHL in interpretation as well as application. Both sides have been accused of violating the principles of IHL. For this demonstration of a clear and unwavering commitment of holding accountable those who have committed war crimes under International Law, including senior members Israel defines Forces and Hamas is needed. In addition, world Major Powers need to play effective role in taking measures to end atrocities in Gaza by both sides (Israel and Hamas).

8.   Conclusion

By explaining the principles of International Humanitarian Law, this paper highlights the ethical considerations surrounding the conduct of war and the protection of civilians in this protracted and deeply entrenched conflict. The historical background of the Israel-Gaza conflict underscores the complex interplay of political, religious, and

territorial disputes that have contributed to its enduring nature. From the early Zionist movement to the establishment of the State of Israel and the subsequent rise of Hamas in Gaza, the conflict has been marked by violence, displacement, and unresolved grievances.

Through a critical analysis of recent developments, including the events of October 7, 2023, this paper highlighted the profound impact of the conflict on civilian populations and the urgent need for accountability for alleged violations of IHL. The indiscriminate bombing of residential areas, the blockade of humanitarian aid, and the targeting of civilian infrastructure raise serious concerns about compliance with the principles of distinction, proportionality, and humanity. However, the failure of the ICC to prosecute alleged war crimes in Gaza underscores the challenges of achieving justice and accountability in the face of political obstacles and power dynamics. Calls for impartial inquiries and accountability mechanisms highlight the importance of upholding ethical and legal norms in conflict settings.

In light of the findings and analysis presented in this paper, ultimately, addressing the violations of IHL in the Israel-Gaza conflict requires a concerted effort to uphold ethical standards, promote accountability, and pursue genuine efforts for peace and reconciliation. Only through a unbiased commitment of major powers to these principles, a sustainable resolution to the conflict can be achieved, by ensuring the protection of civilians and the promotion of justice and human rights for all affected parties.

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Exploring Biases in Recruitment through Social Media and Online Searches (SMOS)

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Abstract

Many organizations claim to incorporate the idea of diversity, inclusion and equality while making hiring decisions. But why these decisions do not always reflect or support the claim of diversity and equality? The current study aims to answer this question by exploring the biases activated during Cyber-vetting that might account for this contradiction. The study used qualitative research design by conducting semi-structured interviews with 4 Human Resource professionals involved in online recruitment. Thematic analysis was performed using guidelines by Creswell and Creswell (2018). The study's findings suggested that the use of Social Media and Online Searches (SMOS) by recruiters can initiate biases causing candidate's rejection based on images or text discovered, or assumptions made during the cyber vetting process. The study found that there is a need to examine, expose, or even eradicate the influence of implicit and explicit bias when recruiters conduct background checks using online platforms. Interestingly, none of the participants verbalized the feeling that cyber-vetting was an invasion of the candidate's privacy. However, it was seen as a justifiable means to ensure that the candidate would respectively fit the culture and organization. The present study sheds light on the importance that recruiters give to social media profiles, and awareness of biases prompted by pictures and content during SMOS. The study shall help recruiters in spotting these biases and need to design trainings that aim at guiding on eliminating such biases letting hiring process become efficient and bias-free.

Keywords: Cyber-vetting, Hiring Process, Recruitment, Biases, SMOS, Human Resource Managers

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1. Introduction

Cyber-vetting is viewed as a great opportunity for organizations to evaluate the individual's personal life and his/her background without having to ask the individual himself/herself, previous employers or references. It is assumed to be an extension of traditional process of history checks of employment for potential candidates (Berkelaar, 2017). Cybervetting, employed as a technological tool for screening people to hire, refers to a process of attaining information about potential candidates through online search engines or social media sites to make decisions of recruitment and selection of people enabling the employer to examine if the candidate fulfils the standards of their organization (Berkelaar, 2014).

At the beginning of year 2022, internet usage in Pakistan increased to 36.5% meaning that around 83 million users of internet exist here with almost 72 million using social media sites actively (Arif, 2022). Social media websites or applications such as Facebook, LinkedIn, twitter or alike have become a source of sharing personal experiences. Such personal information becomes a public source when it is not subjected to privacy settings. Apart from considerable awareness regarding privacy settings, several users might, still, post certain things on social media which could be perceived by employer as favorable for organization or sometimes employer might find something hurtful for the organization such as morally questionable post.

Social media and online searches (SMOS) are a profound factor in the process of hiring even more than a job. The utilization of SMOS like search engines, Facebook, LinkedIn, or some other applications, provide deep insight regarding potential candidates for an employer (Brown & Vaughn, 2011; Curran et al., 2014). It is inevitable to avoid biases such as race, gender, disability or ethnicity when an employer cyber-vets (searches for and finds information on the candidate) through SMOS. The little risk of being sued has broadened the usage of social media sites for gathering background information of candidates to screen them. This, however, may lead to social categorization or biasness in decision making on the part of employer. This is explained by the way recruitment professionals process information during vetting (Derous et al., 2017).

The rise of social media sites like Facebook enabled people to post about themselves, make a profile to show their identity and connect with groups of people from all around the world (Smith & Kidder, 2010). The posts on these social media profiles of people enable not only their family and friends to view but also open door for hiring professionals who look for personal information while screening candidates. The recruiters making decisions for hiring can use SMOS and online internet based sites to acquire information about candidates if users have posted material with no privacy restriction settings. This process of cybervetting can elicit biases, implicit or explicit, towards the people during screening process of resumes before interviews on even sometimes after the candidate has given interview for the job. Accordingly, subconscious biases which include implicit and unconscious bias include biasing factors such as race, gender, age, sexual orientation, and socioeconomic status of an individual (Jones, 2017).

The social media site mostly intended for professional networking and finding suitable candidates online is LinkedIn. Since the purpose of this social media site is to allow organizations to closely "look" into the individual's profile that represent their cyber-résumé, the privacy settings on LinkedIn are rarely used. Nevertheless, employers seldom use LinkedIn for acquiring informal information about the candidate and other social media sites are perceived to be more useful in this case (Greenwald & Krieger, 2006). Grasz (2016) found that around 41% of employers do not proceed with interview of candidate if they find difficulty in extracting information about candidates on online sites or social media platforms.

Apart from potential biases that may occur during the hiring process, there may be a legitimate business reason for looking at social networking sites to discover information about a potential employee that goes beyond the traditional résumé (Roger et al., 2017, p. 153). One reason could be to hire individual based on his/her previous work experience posted on his/her social media profile. In a study by Acquisti and Fong (2019), it was discovered that "discrimination via online searches of candidates may not yet be widespread, online disclosures of personal traits can significantly influence the hiring decisions of a selected set of employers" (p. 4). Since they studied only race, gender and sexual orientation of candidates or the stuff they post on online sites, the current study shall strive to fill the gap in previous researches by focusing not only on the majorly studied discriminatory factors (race, sexual orientation and gender) but other factors as well such as ethnicity, age, women, socioeconomic status etc. as extension to the idea of intersectionality viewing the context of Pakistan.

It often becomes difficult to study underlying biases due to hiring professionals being unaware of their unconscious cognitive biases and thought patterns. Also, when large pool of candidates is generated, deep screening may not be performed attracting employers towards certain candidates and not others leading to biasness due to superficial characteristics of candidates (Hunter, 2007; Maddox & Gray, 2002; Rattan et al., 2019).

Although laws and policies appear to limit inequity, discrimination still lives (Patten, 2020). Discriminatory practices are not only subject to gender or race but also to those people who are disable because it is assumed by employers that physically disabled people may perform less compared with physically fir individuals (Carvalho-Freitas & Stathi, 2017). Therefore, it is very essential to notice that such discrimination is not always with single dimension but covers multiple other factors as well giving rise to intersectionality.

Effective and efficient approaches to participant recruitment in research have historically been fraught with difficulties. The simplicity of recruiting participants has been revolutionised by the exceptional expansion of social media platforms like Facebook and Instagram, in contrast to more conventional approaches like radio or newspaper adverts. Even if these recent developments appear to improve recruitment performance, they are not without drawbacks and shortcomings of their own (Oudat & Bakas, 2023). The drawbacks can be serious when such informal way of hiring candidates and gathering background information using SMOS is performed. It can be severe not only for the one who is hiring candidate but the candidates themselves. So the problem that organizations need to consider is that cybervetting using

SMOS may activate biases that influence hiring decisions against candidates and they need to be eliminated.

This study shall be focusing on the use of SMOS by hiring professionals/recruiters during hiring processes and explain how biases might occur during this process.

2. Literature Review

2.1 Hiring Patterns

Organizations consider their prime responsibility to conduct due diligence screening before hiring any candidate on a vacant position. Traditionally, reference checks appeared to be useful for companies to safeguard themselves from offering jobs to unsuitable people and provided opportunity to crosscheck the information showed by candidate on their forms ensuring validity. A study by Beason and Belt (1976) performed on a sample of recruiters found that 77% of 150 respondents offered job after obtaining reference checks through calls or letters. Similarly, 68.85% of hiring professionals pursued references after interview but before offering the job (Beason & Belt, 1976). In recent times, using SMOS for hiring decisions have become far more pervasive in making decisions regarding recruitment and selection.

Another paper critically examines the increasing influence of social media (SM) or social networking sites (SNSs) on various human resource management (HRM) practices. The study reviewed 87 published papers from the Web of Science Database, specifically from 2010 to June 2020, using VOSviewer software. The analysis reveals that the use of SM information for HRM practices is growing, particularly in talent search and recruitment & selection (Hosain, 2021). Facebook and LinkedIn are the most popular platforms among hiring professionals, with Facebook providing behavioral information and LinkedIn offering job-related information. Additionally, the presence on SM can help organizations develop strong corporate branding.

2.2 Reference Checks and Predictability

Cyber-vetting (the use of SMOS for hiring) today and traditional method of obtaining reference checks are somehow similar. They both intend at finding the best suitable person for the job. Previously, candidates' data was crosschecked through resumes, telephonic calls to relevant references or through mail letters to avoid any misleading information that may hamper the decision making process and harm the organisation afterwards (Carr, 2016). It helped the recruiters to gain access to candidate's background information about his/her attitudes and behaviours or accomplishments from the prior employers of candidates (Schmidt & Hunter, 1998). But, since this is too old a research, it is seen that there is possibly weak validity of using reference checks in selection process that might generate the need in recruiters to use SMOS to dig deep into applicants' life practices becoming an indiscriminately tool for scrutiny.

2.3 Cybervetting

It has created a new spectrum in the field of hiring in organizations giving an opportunity to conduct reference checks on social media profiles without having to ask anyone

or even candidate himself. According to Berkelaar's (2010) definition, cybervetting refers to a process whereby hiring professionals extract data about applicants from informal online resources such as social media profiles to gain ease in making hiring decisions. Since SMOS are a snapshot of applicant, it sometimes may overturn which may be associated with a résumé potentially hurting the applicant. The videos and images posted by people may not be much significant to them but they certainly appear as a great concern for those who are looking candidates for job through online platforms. In a study by Zschirnt and Ruedin (2016), ethnic minorities were found to be less educated and had rare means needed to become successful employees which gave birth to negative feelings in hiring professionals towards them. Therefore, it affects the evaluation process of these minorities' ability to outperform by recruiters.

Analysis of 45 hiring professionals and 44 applicants by Berkelaar (2014) assessed how these professionals and applicants made sense out of cybervetting. The findings reported that recruiters were of the view that cybervetting is inevitable for transparency matters and acquiring information from social media to decide if the candidate is fit for organization or not. On the other hand, Ghoshray (2013) stated that, "an employer making employment decisions based on such information could erroneously draw inferences on the suitability of an applicant, which may expose the employer to liability for discriminatory employment practices"(p. 652). Thus, SMOS' use for making employment decisions can be subjected to questioning its validity.

Another study examines the influence of potential employees' social media accounts (SMAs) on hiring decisions made by human resource (HR) professionals. It involves 38 HR professionals responding to 16 open-ended questions. The study found that HR managers in the tourism sector generally favor reviewing candidates' SMAs over traditional references. This preference stems from the perception that SMAs provide a more efficient and cost-effective method for screening a large number of applicants (Demir & Günaydın, 2022).This paper underscores the increasing significance of social media in the recruitment process, filling a gap in HR management literature by offering empirical insights into how job applicants' SMAs influence hiring decisions.

2.4 Discrimination, Bias and Stereotyping

It is normal for companies to seek and utilize different sources for screening candidates to hire on a vacant position. Discrimination, however, is still a widespread practice. The applicability of legislation such as the Civil Rights Act of 1964 brought changes in many hiring practices but it still needs more work to be performed to completely eliminate the discriminatory issues. Even in 1991, when discrimination was considered to be a practice of past, its relevance is still prevalent in the workforce (Antwi-Boasiako, 2008; Bennett-Alexander & Hartman, 2014).

With increasing usage of SMOS by recruiters, engagement with candidates is made more smooth without any legal retributions. Due to this, the laws have yet not caught the technological practices to safeguard applicants from facing discrimination as a result of cybervetting (Ghoshray, 2013). Stereotyping is also common assumed to be a process of

separating 'them from us' irrespective of candidate's competences and experiences. According to a study by Derous et al. (2017), although irrelevant but recruiters may look unto the ethnic names or pictures and affect the hiring decision hurting the candidates. Similarly, Uhlmann and Cohen (2007) conducted a study and identified that such discriminatory practice on the bases of ethnicity is increasing not only due to ambiguous circumstances but due to the decision maker's self-objectivity or imperviousness regarding bias. Such discriminations still prevail in workplaces despite increasing importance in eliminating such practices while making hiring decisions (Banaji & Greenwald, 2013; Jolls & Sunstein, 2006).

The studies focusing on identifying the underlying factors in hiring discrimination, the doors to review how recruiters are likely to discriminate candidates open up. It leads to an opportunity to devise interventions for hiring professionals to ensure the transparent processing of hiring and for candidates to get informed on how to avoid eliciting biases against them (Uhlmann & Cohen, 2007). Lee et al. (2018) performed a research study and explored emotions of recruitment personnel that how certain emotions of fear impact attitudes of recruiters towards applicants. They found that, "Participants primed with fear demonstrated the greatest risk perception, but only if they also experienced the negative affect induction" (p. 3).

Thus, cyber-vetting is all up to the organizations and their hiring managers to perform a thorough analysis of all online resources important to make an educated hiring decision about the candidate. Nowadays, acquiring valid and credible information from prior employers of applicants becomes harder, internet and online sources come in handy enabling employers to access valid information about candidates before calling them for interview or offering job (Grasz, 2016).

Another article deduced online platforms and social networking sites have revolutionized candidate attraction, while cybervetting and applicant tracking systems have introduced both opportunities and challenges in screening. Emerging methods like asynchronous digital interviews and gamification-based assessments are transforming the selection phase, with a critical focus on how candidates respond to these innovations (Nikolaou, 2021). Additionally, technological developments in onboarding and socialization are improving the integration of new hires. The article calls for further research to explore these evolving technologies' impact and effectiveness, ensuring that they continue to enhance the recruitment and selection process while addressing any associated risks.

The intended study assumes, as supported by the implicit bias literature, that biases exist and are a prevalent feature of human thinking, behavior, and interaction. Thus the idea is to address the gaps in the literature regarding the biases that are triggered and formed when social media profiles, including text and images, of job candidates are viewed during social media and online searches as part of the hiring or cyber vetting process.

3. Research Questions

1. Are hiring experts aware of the conscious and unconscious biases that emerge while cyber-vetting candidates for the job?

2. How do hiring professionals apply biases to candidates when conducting social media and online searches (SMOS) during the cyber-vetting of applicants?
3. Does using social media for screening candidates lead to loss of potential candidates in respective organization?
4. How can these biases be avoided or minimized while using SMOS ?

4. Methodology

4.1 Research Design

A structure or a design is imperative for a research work as it lays the foundation for the flow of the research process (De Vaus, 2001). The study used a qualitative design to explain the use of SMOS by recruiters and how it brings forth biases when online platforms are used to screen candidates. Qualitative analysis incorporates interpretation of interviews taken, observations and any documented data available relevant to the question under study to extract substantive meanings, patterns and themes existing in the studied phenomenon (Patton, 2015). Thus, qualitative data analysis followed by thematic analysis was performed for current study to gain in-depth insight into the subjective experiences of people on the concepts under study.

This study employed a constructivist approach that aims at understanding how individuals make knowledge of the world through their reflection on life experiences; personal as well as professional (Creswell & Creswell, 2018).

4.2 Sampling Strategy

The foremost step of data collection is to identify the people or organization that will help you answer your research questions. Population is also defined as the group of people who share similar features (Creswell, 2013). Target population is the group for which the researcher wants to generalize a study (Bhattacherjee, 2012). The target population for this research are hiring professionals.

Nonprobability purposive sampling technique is used to recruit the participants. A purposive sample of 4 hiring professionals were recruited from the population of managers, HR personnel, recruitment personnel who have active participation in the process of cyber-vetting and making decisions for hiring.

The demographics of participants are shown below in a table;

Table 1: Demographic Characteristics of Participants

	Gender	Age(years)	Designation	Experience	Industry/Organization
1	Male	33	Assistant Manager HR	5+ years	Healthcare Industry
2	Female	25	Talent Acquisition Head	2+ years	Growth Levers
3	Female	25	Recruitment Officer	2 years	Tameer Constructions
4	Female	29	Recruitment Officer	4+ years	Retail Sector

4.3 Data Collection and Data Analysis

Data was collected through semi-structured interviews. The qualitative data for the current study was collected through online interviews using Zoom and Google Meet. The participants were approached through LinkedIn. Prior information was obtained from the participants on whether they do online recruitment or not. Those who agreed were asked for an interview.

4.4 Interview Guide

The interview guide was created such that it aimed at gaining a rich comprehension of the process of cyber vetting used by hiring professionals and the occurrence of possible cognitive biases in screening candidates. The guide was based on three major questions. These questions inquired about the demographic information of participants including their professional experience in hiring process, their recruitment and selection process experience, and screening candidates using SMOS or through online platforms. Open ended questions were made to cover the participants' practices, values, thoughts, and beliefs associated with cyber-vetting, selection, or use of SMOS while hiring people. The interview guide is attached in appendix.

5. Findings

5.1 Cybervetting; A Known Phenomenon or Not?

Participants were asked about their understanding, awareness and use of cyber-vetting when looking to hire and performing background checks. This question aimed to assess participants' understanding/awareness of cyber-vetting as a tool (using SMOS to view personal pages on Facebook, Instagram, or any other SM platforms or online, public sources of information). Each participant displayed a grave awareness of what cyber-vetting was and the websites that could be used to vet a candidate.

Participants freely answered questions regarding their understanding of cyber-vetting, and the processes used when reviewing candidates either prior to or before hiring. Participant C stated that his first steps are to,

"...if some resume fulfils our criteria, we discuss with team members to decide for first screening interview. Sometimes it happens that we check other profiles linked to that candidate as well to start background checks or to verify the description he has mentioned in his resume. And then we call that person for interview..."(Participant C)

Another participant, when asked about same question, said,

"...cyber-vetting is usually done when we want to have some background checks for the candidate to make sure if he/she is what he/she portrays to be. For senior positions and more managerial positions, we go for looking into some social media profiles of candidates..."(Participant A)

One of the Participants continues talking about the process of cyber-vetting acknowledging that she looks to social media during cyber-vetting process for how the person brands themselves or presents themselves like he said,

"...they are a source from where you can know how a person presents himself. Like, if we are hiring a candidate who needs to be proficient in interpersonal relationships, or in socializing... we would go for checking his networking status. We can get an insight through his social media accounts..."(Participant A)

The major themes identified after grouping the categories and codes found common in responses of participants were: Social Media use; SM red flags; Biases elicited due to SM use; Observable characteristics on SM; Awareness and Management of biases. Where needed, some themes were further broken down into subthemes representing unique concepts within the theme.

5.2 Social Media (SM) Usage

SM was a main category where the SMOS platforms used by participants to cyber-vet candidates were identified. All four participants (100%) noted the use of SM to be both relevant and essential in the cyber-vetting of candidates. Some of them felt that it was helpful to not only use SMOS to examine candidate's employment history, lifestyles, and business and personal connections, but also to look for any other information on SMOS that could be deemed as significant in making a hiring decision (e.g., general behavior on SM). One of the participants claimed not to utilize SM in a formal capacity to vet candidates or make decisions; however, the researcher found inconsistencies and contradictions in some interview responses that could suggest some hiring decisions could be made or influenced by informal peeks at a candidate's profile page.

One example of this was Participant A who when asked about SM use to cyber-vet first stated:

"Right now, we, as a professional, we only use LinkedIn. Once the person has, you know, is selected, we go for a reference check as well, but we don't go for their personal social media accounts immediately to find in-depth details..." (Participant A)

However, when asked about the aspects of social-media and cyber-vetting later in the interview he said,

"...it can be beneficial for a recruiter that if we do a check on their personal social media account and we see that there is a hate speech...there's some explicit content or what kind of language he or she used. So it can be a breakthrough for the recruitment process..." (Participant A)

All of the hiring professionals that participated in this study agreed that their organizations used SM, either formally or informally, as a way to cyber-vet applicants. A study by Kluemper and Rosen (2009) supports the notion that employers that use SM platforms to assess personality are able to predict high and low performers based on images identified on SM networking sites. As an example, participant A stated,

"...for senior positions and more managerial positions, we go for looking into some social media profiles of candidates... It helps us to know his/her previous reputation at work as well as give some hints regarding that person's personality as well..." (Participant A)

Participants reported the most common SM platforms used to cyber-vet are LinkedIn and Facebook. Other sites not as commonly used were Instagram, Twitter, and Google Search (engine). Only one participant reported the use of Google search engine as a part of Boolean search.

5.2.1 LinkedIn

The interviews suggested that participants utilized the LinkedIn platform as a business resource to determine certain aspects of candidate viability from a business point-of-view. Those who use LinkedIn as a platform to cyber-vet, all of them stated that they put great importance on making sure that candidates résumé matched with what was on their LinkedIn page. The following quotes illustrate this sub-category:

"We check LinkedIn to preview their previous job records..." (Participant C)

"...we focus on their professional portals, which is LinkedIn and we do preview their LinkedIn profiles. So that's what we do. After selection, we can have a reference check. Through LinkedIn, we are more towards like, if we found someone that was suitable and who was already been working in that domain, so, we go for like, we check their mutual connection, which is in our mutual friendship, so we contact them, we ask them about their profile, we ask if they know that person, their personality etc..." (Participant A)

"...as I told before, if the position demands a certain characteristic in candidate, like appearance, social network, extroversion kind of things so we view for these things on LinkedIn..." (Participant B)

5.2.2 Facebook

Facebook is a site that individuals use on a casual basis for communication and sharing pictures and updates with friends and family. For some, it provides a way of creating an alternate persona, somewhat different than what people may see face-to-face. These styles of posting to Facebook can at times hurt a candidate especially when hiring professionals look at Facebook for verification of character and potential red flags that may be brought into question. The following participant's excerpts give examples of how they use Facebook as a cyber-vetting tool:

"Sometimes Facebook is used too...Like, if we are hiring a candidate who needs to be proficient in interpersonal relationships, or in socializing... we would go for checking his networking status. We can get an insight through his social media accounts... I, at personal level, try to search more about that candidate. His previous history regarding work, like you know, his reputation or how he is in terms of behavior. So having this in mind, I just went into his Facebook profile..." (Participant A)

Therefore, SM was used to verify a résumé, to see what a person looks like prior to an interview, for informal assessments that sometimes come from others (comments on a page),

for attempts to identify inappropriate information, and to get a personal look at the candidate and his or her life.

5.3 Biases Elicited by Using Social Media and Online Searches

As the use of SM allows individuals to share information, the participants acknowledged that some items shared on SM platforms might open the door to both implicit and explicit biases. Following sub-themes highlight the very aspect.

5.3.1 Images on Social Media

Images substantially contribute to how employers paint a picture of the person to be hired. Conventional background checks typically focus on reaching out to previous employers to gain information; however, use of the Internet, specifically SM platforms like Facebook and LinkedIn, provide opportunities to reach deeper into the life of a candidate to identify if there is a fit. Exposure to pictures of the candidates, as well as their personal and work life, expressed through pictures and posts on their SM profile, opens the door for implicit and explicit bias to occur. One participant discussed his thoughts on how images can bias employers by emphasizing:

"…it has become a trend that we don't take anything serious. We joke about our political conditions, law and order or even what usually happens in our society. So such posts or images which represent these kind of traits or acts of people are sometimes not perceived as good by recruiters…" (Participant C)

Another participant expressed his views when asked about the same thing in such words,

"…if I talk about myself, if I see some questionable stuff or posted images, you know, it will give some red signal to me. What if that candidate is not ethically up to the mark? You can't simply take risks like these." (Participant A)

Examining images on SM provides employers the opportunity to make observations of a candidate, through the lens of the hiring managers. The hiring manager is likely to have some preferences, biases (implicit or explicit), and triggers (red flags) for what they do not want to see when looking into a candidate (e.g., political imagery).

One participant said,

"…Like if we are hiring a position that needs to be presentable, we will look into the profiles and see how the person posts about himself, how he or she posts images about their self…If they are showing themselves in a way not acceptable by our company's moral code or the company for which we are hiring, then we do not proceed with that candidate…" (Participant B)

However, the content of posts, in terms of words and language used, also were clearly featured in many of the interviewee's comments. However, it seems pictures were more influential.

5.3.2 Observable Characteristics on Social Media; Gender and Age

Almost all participants held the belief that the ability to see gender, more specifically for women, was an observable characteristic that could lead hiring managers to become biased or make decisions based on being a woman. Participant C remarked,

"...as I have experienced it much in my surrounding as well. Females are mostly neglected in technical jobs or the ones that include going on sites. I am also the only female here at my organization. They do not prefer females for outside field work even if competent females come up for interview..."(Participant C)

One of the participant considered gendered perspective towards hiring to be very fine which reflects how gender discrimination is not even considered a discrimination. As that participant remarked,

"...if a position is like the requirement of that job is to, you know, go outside and you have to deal with hundreds of corporate clients and you have to do the stuff, so there is a specific need for that job, and there would be specific requirements. So, that's fine if the job role, which we are looking for is, you know, is required for specific gender..." (Participant A)

Other characteristics that were mentioned as possible factors in SM-generated bias were the ability to observe age, especially older candidates. One of the participant mentioned,

"...age does matter a lot. If we are hiring for a start-up or if somebody is hiring an HR person in their own company so they see if the candidate is aged or like 45 years old, the recruiter might assume this person would not be that flexible and would be used to, like, working in a structured organisation for years and years so this candidate might not be a good fit...and at the same time if we are going for a Seth culture company where older people might be a good fit because there is this thing with Seth culture that young people who might come up with innovative ideas are a threat to senior management ...so here we hire aged people or prefer aged people..." (Participant B)

One of the participants, even though aware of her bias towards age, mentioned that she cannot resist this. She said,

"...age thing is concerned. So age is the one thing I will be probably making my decisions on, because it's my issue here with like it's not that easy to stereotype career and it's not right but again for software houses, IT positions would be interesting and they need a youngster..."(Participant D)

5.3.3 Ethnicity

In western context, race appears to be generally a SM-generated bias but in the context of Pakistan, ethnicity appears to a discriminatory factor. It was evident through response of one of the participants when she said,

"...as we are a construction company, we hire labour which mostly belong to KPK and Baluchistan. They have a very strong point of view about Punjab and some even have deep hatred for Pakistan, as you know our history with Afghans...I don't want anyone like that in

my company who does not have good intentions. So candidate's views matter a lot. We cannot have groups in our organizations who would create conflicts…" (Participant C)

5.3.4 Cultural Fit

All participants were concerned with a new hire and compatibility with other employees in the company. However, participants felt that cultural fit was important prior to hiring, and again, SMOS provided information on what a candidate could be like if hired. Participant C remarked,

"…I, then, see about what type of views and believe that person has. Are they aligned with our organizational policy, culture or moral code or not. I mostly observe that candidate might not be having a history of something that might harm our organisation's image..." (Participant C)

This was the general consensus of the majority of participants, with Participant B also adding*, "… if I'm hiring for a startup and he has worked for Maple, that is a Seth culture company then he would not be culturally fit…so we also need to research on the current company that he's working in or what nature does, you know, that company has, what kind of culture that companies have in order to give the best people to our clients…" (Participant B)*

Participants overall felt that it was important to use SM sites like Facebook to observe everyday life or the perception that the candidate chooses to share. By examining, insight can be gained to the type of behaviors that could be expected if hired.

5.3.5 Organizational Fit

Organizational fit proved to be necessary for all participants. When assessing if the candidate will be a good fit for the company, recruiters are looking at the values, characteristics of the candidate and comparing them to that of the organization. Participant C stated that,

"…previous experience is also a contributing factor…if we once had bad experience with an employee coming from a certain company, we generally hesitate in hiring candidates from same organization. Like, they would not fit into our organization." (Participant C)

Organizational fit for some of the participants went hand-in-hand with the candidate having the skills to match the job. As participant A said,

"…For senior positions and more managerial positions, we go for looking into some social media profiles of candidates…as the recruiter, the most important points are their job responsibilities, which they are currently performing… other factors like in which company they are working, or are they industry based like can that candidate perform his current industry practices to our requirements or not?" (Participant A)

Additionally, Participant B laid strong emphasis on job hopping as one of the biggest red flag for their organization. They considered it to be unfit for their organization. As the participant remarked,

"…so if they have stood there for less than one year and they have job hopped from one company to another, then that is a huge red flag and we don't usually take that person no matter how good the skill set is, no matter how good the education and everything else, or the company

that they're working in…If that is not an issue, then obviously, the skill set and the nature of company matter…" (Participant B)

5.4 'Institute' Matters

When speaking of being qualified for the job, one of the participants emphasized on qualification and educational institute to be important factors which might bias a recruiter based on previous experience form same institute or same educational background. It was stated by that participant as,

"…education, degree, years of experience, again the kind of companies etc. Like if there is a candidate who has studied from NCA so it is generally believed that they are non-serious in terms of working, they are more like freelancer stuff…so if someone with this background comes up, the recruiter does not go for him/her. That person is not usually taken up for shortlisting, you know. In such case, recruiter can be biased based on these predefined assumptions…" (Participant B)

Finding the right candidate with experience in the field was important to the participants, as was the ability to use LinkedIn to validate résumés being equally as important. The ability to examine job experience as well as references by colleagues or former employers that validated skills and performance aided in making the connection that the candidate had viable skills to fit the needs of the job. Additionally, it was observed that personal institute of recruiter appeared to bias the hiring process as well. It was evident from the response of one of the participant. She mentioned;

"…if somebody is from (institute name) and if the person and the other candidate is from different universities and they both appeared in my interview, so I'll definitely be more affiliated with the person who's from the (institute name) because of my affiliation with my institute…" (Participant D)

5.5 Social Media Red Flags

All participants (100%) felt that while using SM as a tool to vet potential hires, red flags would halt them from either interviewing or making a job offer to an interviewee. Participant B felt that using SMOS as a tool was important to establish what kind of person they might be. He said,

"…things that matter during cyber-vetting using social media is totally dependent on existing doubts…we see social media profiles only when we have certain doubts about the candidate…if they are showing themselves in a way not acceptable by our company's moral code or the company for which we are hiring, then we do not proceed with that candidate." (Participant B)

Another participant said,

"…the candidate can post stuff on personal profiles that might not be appropriate like if their posts show some personality issues which might interfere with organizational rules, so we generally do not hire such candidates…" (Participant C)

5.5.1 Negative Attitudes and Posts

Negative attitudes were another area of concern for participants as well. Participant C remarked,

"...on social media we check that if they have posted anything troubling or which can create problems like culture misappropriation, gender discrimination or some content about their previous workplace. Through all this we can at least have an idea that what type of person we are hiring...once I was going through a candidate profile and he had posted something about "Aurat March", I know there are many controversies about it but how you present your view is important. He had used some very harsh words in one of his post, and that was not acceptable for me. Similarly, if someone had constantly complaint about his/her workplace that also does not leave a good impression..." (Participant C)

The participant while answering another question in an interview also expressed such thing in words as,

"...also, some people who post about their previous organizations and discuss their experiences openly, it is also a point of concern for me..." (Participant C)

Another crucial red flag factors for the participants was an unprofessional content, posting negative complaints about previous employers or job related issues, and discussing organization related experiences on personal social media profiles or on a page. For instance, one of the participant shared an instance from his past experience while mentioning about some negative attitude of candidate on social media,

"...I just went into his Facebook profile. The post I encountered was something related to his past organization and his work experience there. It had some, like, hate content...which I think is a threat to the reputation of organization you work at...I did not pursue that candidate as organization's reputation and its supremacy is important..." (Participant A)

Another participant also highlighted this aspect while sharing his views. He stated that,

"...If the candidate has a history of writing or discussing issues related to work on online platforms, it goes against our policy so we are reluctant towards hiring that person..." (Participant C)

These candidates came to individual conclusions that negativity in posts could lead to a cancerous behavior being transferred to an organization and also other employees. SM provided a path to examine context on a webpage that would allow the hiring professional to make decisions based on what was read.

5.5.2 Online Persona vs. Reality

Another sub-theme found under SM Red Flags was online persona vs. reality, in other words, a fictitious persona that an individual wants other to see or identify with. One of the participant stated,

"...If someone is behaving differently on their professional account and their personal account this can create a bias. It can alert the recruiter that why discrepancy exists in both profiles. It

is a concern that what is original. Is the person portraying himself right on his professional account or on his personal profile?"(Participant C).

6. Discussion and Conclusion

The previous section discussed the results of the analysis, linked the analysis to the research question, and illustrates consistency in the analysis. Four participants were interviewed, and the results were described in depth according to major themes and sub-themes that were guided by the research question. A need exists to examine, expose, work to reduce, or even eradicate the influence of implicit and explicit bias when hiring managers conduct background checks using SM platforms, especially when such behaviour results in the exclusion of potential candidates or candidates who belong to a protected class. Given that people are inherently biassed in how they perceive the study areas and thus report their actions in a different way than the actual practise (Steiner et al, 2011), it is reasonable to assume that recruiters are aware of the limitations and do not consider cybervetting to be a reliable, valid, or objective method. However, because recruiters are often driven by mistrust (Berkelaar, 2010), they wind up spending more time cybervetting in order to get as much information as possible.

SM use provides the opportunity for users to post images which in turn allows recruiters to use those pictures to help determine whether the candidates appear like they might fit the organization. These types of pictures combined with (sometimes negative) images portrayed through the media can influence recruiters to make off-based ethnic generalizations leading to job rejections for the minority candidate as people from KPK and Baluchistan or "Afghans" faced discrimination and job opportunity in Punjab based office in one of the 4 conducted interviews. The findings of the study indicated that how certain prejudices may arise against or for a candidate based on the content available through social media platforms as evident from the themes described above. They also suggested that how images and text found on social media can alter the perceptions and decisions of recruiters. These findings were consistent with previous research study by Derous et al. (2017) where they stated that although irrelevant but recruiters may look unto the ethnic names or pictures and affect the hiring decision hurting the candidates. Similarly, Uhlmann and Cohen (2007) conducted a study and identified that such discriminatory practice on the bases of ethnicity is increasing not only due to ambiguous circumstances but due to the decision maker's self-objectivity or imperviousness regarding bias. Participant A's lingering negative emotional response (If I talk about myself, if I see some questionable stuff or posted images, you know, it will give some red signal to me) demonstrates how emotions are central to moral assessments (Hitlin, 2011).

Consistent with previous literature and agreeing with the theory of attribution and theory of Implicit Bias as Greenwald et al. (1998) explained, the findings provide essential insights into the hiring process using online platforms where certain biases were activated during screening of candidates without conscious awareness of participants and flaws were attributed to the minority status (ethnicity, gender, age) of some candidates instead of their individual characteristics. Additionally, stereotypes about certain groups were also found to appear as a discriminatory factor while making hiring decisions.

Interestingly, the findings of the study also explained how participants, by taking a moment to dig deeper into candidate's background after finding contradictory content on their social media profiles, led to conclusions that candidates were worth interviewing and even selected for hiring.

Increasing diversity and inclusion is challenging at times, and it takes a commitment from the organization, the HR management team, and overall leadership to break the barriers and look beyond what may be displayed about a person on SM. The goal of the recruiter or hiring professional should be to hire the most qualified person for the job regardless of gender, age, or any other category of discrimination. It is up to that recruiter to find out who the candidate is on paper, as well as online, and if there is an organizational fit that warrants an interview or ultimately an offer of employment. Decades ago, a résumé and background check backed by a previous employer was standard. However, in today's technology-driven society, searching online sites such as LinkedIn, Facebook, Instagram, and others have allowed not only friends and family, but recruiters to have a peek into the lifestyle that is portrayed in pictures and postings over time for almost anyone to see. Despite recruiters' proclivity to hunt for material online, the information they gather from various work settings might influence their judgement on whether a candidate is fit (Putnam & Jablin, 2001).

Stereotypes about certain categories (age, gender, and ethnicity) often lack any basis in reality, but once invented, are often carried over from generation to generation. In this way, SM can be used to vilify and sometimes confirm the perception of what a person is, based on an image. Inclusion should not mean forcing organizations to hire applicants that would not fit the job or organization just because of minority status. However, proper diversity training must ensure that hiring professionals are aware that information on SM is not always correct and can be tainted by implicit biases against people who are members of specific groups.

7. Practical Implications

The results of the study imply that organizations need a well-defined hiring policy and should require diversity training that is inclusive of SM use during the hiring and cyber-vetting process, and how to overcome biases.

- First, training should be based on self-awareness of biases and taking responsibility to identify areas where personal growth is needed through awareness of biases that each manager may encounter during the cyber-vetting process.
- Secondly, this research also shows a need for policy and guidelines in organizations surrounding the use of SM during the hiring process as well as required documentation of the use of SM during the cyber-vetting process.
- Thirdly, screening process shall not only be limited to online checks on social media profiles, some further tests shall be performed such as psychological assessments to hire the best possible candidate or to validate the information found doubtful on personal profiles of candidates.

A practical application of the research findings could be training workshops that include the mechanics of privacy settings explaining how users can choose options on their social media accounts to prevent recruiters or strangers from seeing anything more than a basic profile.

At the organizational level, by employing social networking sites like Facebook, LinkedIn, Twitter, and Instagram during cyber-vetting, employers are engaging in proactive vetting of posted images and text that might contribute to biases against some potential candidates. As a result of this growing trend of informal and formal cyber-vetting, employers must be able to recognize any area for biases (implicit or explicit) that will allow for the denial of employment or interviews based on materials that have been identified on SM.

At the societal level, by addressing the awareness of how images found on SM might allow for biases to impede applicants from attaining employment, steps can be taken to alter how searches are completed, what information should be identified on SM, and what information is off limits.

8. Limitations and Future Recommendations

- The study employed only four participants for doing analysis. Limited sample size leads to low external validity so the results may be limited to organizations that currently use the Internet as a cyber-vetting tool with similar demographics to those described in methodology. For example, smaller organizations without hiring professionals might have different patterns of use of SM information in hiring practices. Therefore, future research could incorporate more sample of HR recruiters to obtain deep insights into this study area.

- Another limitation to the study could be volunteer bias, the error that results when volunteer participants respond differently than the general population would respond (Demir et al., 2017). Future studies can avoid this bias and perform random sampling to enhance the accuracy of results.

- Based on the demographics of the participants, factors such as participant gender, and location of the organization could bias and ultimately influence the study. To increase generazibility, sample participants could be employed from different cities and organizations in future.

- The results may also not apply to organizations that rely solely on standard background checks that contact candidates' prior employers for information on performance.

- Assistants who may help vet candidates were not interviewed for this study, which also may exclude additional perspectives or influences on hiring. Future research can focus on interviewing assistant HR recruiters as well.

- To enhance the credibility of HR organizations, future research could investigate the impact of organizational reputation, trustworthiness, and transparency on the use of social media in hiring practices.

- To enhance the credibility of HR organization, a research should examine how HR organizations' credibility influences the perceived validity and reliability of social media information in hiring decisions.

- Investigate the role of certifications, such as SHRM or HRCI, in enhancing the credibility of HR professionals and their use of social media in hiring practices.
- Explore the impact of HR organizations' social media policies and guidelines on their credibility and the use of social media in hiring practices.

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