



Spiral of Silence and Social Media Platforms: Investigating The Role of Religiosity

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This study postulates a deep inquiry into the spiral of silence that ensues in current communication, exclusively in the sphere of social media platforms. The spiral of silence theory has the idea that if people have a firm belief that their opinions belong to a minority version, they will try to remain silent or be less likely to speak out due to the fear of social isolation. Social media platforms provide an important place for the public sphere by giving unique features to keep anonymity. It is a cross-sectional study in which a 384-sample size has been taken. The study tried to explore the moderating role of religiosity in the spiral of silence model. The mediation analysis revealed that willingness to self-censor mediated the relationship between fear of social isolation and withdrawal behaviors. The moderation analysis demonstrated that the level of religiosity moderated the relationship between fear of social isolation and withdrawal behaviors Those who are more religious less likely to withdrawal behavior.



1. Introduction

The spiral of silence theory argues that most individuals are feared of being socially isolated and hesitate to speak out or express behaviour when they observe that their point of view does not fit within a popular voice (Noelle-Neumann, 1974; Brady et al., 2023). The significant assumption of the theory is the fear of isolation, which encourages them to keep monitoring the opinion of the majority through mass media, interpersonal environment networks and other agents to prevail in a sense that whether their own opinions match or fit within a popular view or not (Chen, 2018; Masullo et al., 2020).

Heyd (2021) maintained that the advancement in technology and the emergence of social media led communication researchers to re-assess the hypothesis of the common theories which were established in the atmosphere of traditional mass communication. Shin, et al (2022) argues that the involvement of different online environments challenges the assumptions of the spiral of silence theory. Moreover, the anonymity of these online platforms also encourages the participants to be willing to speak (Burnett, 2022).

One of the central components of the Spiral of Silence theory is the assessment of the climate of opinion. Individuals constantly interpret their social and media environment to gauge the prevailing attitudes or opinions. However, this assessment is susceptible to distortion due to a variety of factors, including personal biases and selective exposure to certain media narratives (Sude et al., 2019). As a consequence, individuals who perceive their views to be in the minority might withhold their opinions to avoid potential ostracism, thereby inadvertently contributing to a homogenization of public discourse (Sohn, 2022). Individuals' willingness to express their views publicly further deepens the implications of the Spiral of Silence theory (Duncan et al., 2020). Those who perceive their perspectives to align with the majority tend to be more vocal, whereas those holding dissenting opinions often prefer silence to avoid potential backlash. This disparity in public expression can further marginalize minority viewpoints, thereby reinforcing the apparent dominance of the majority perspective (Chaudhry & Gruz, 2020).

The role of media, both traditional and digital, significantly influences the Spiral of Silence (Sohn, 2022). Media often amplifies majority opinions while overlooking minority perspectives, thereby creating echo chambers that intensify the spiral (Żerebecki et al., 2021). This effect is particularly evident in the era of social media, where algorithmically-driven exposure can reinforce existing beliefs, and where users are both consumers and producers of content (Papa & Photiadis, 2021). The influence of brands, influencers, and politicians is magnified on social media, offering them potent tools to shape public opinion (Sarwar et al., 2021). Furthermore, platforms like YouTube and LinkedIn Learning serve as resources for learning and personal development (Capriotti et al., 2021).

Willingness to speak out is considered to be the outcome variable in seeking the spiral of silence phenomena (Masullo et al., 2020) but still willingness to self-censor is also a very crucial variable in the spiral of silence phenomena. Willingness to self-censor (WTSC) is defined as

holding as one's true opinion (Burnett, et al, 2022). To remain silent and to delete posts are not the same phenomenon. In face-to-face communication, people stay silent or take back their words so in social media platforms people delete their posts is called withdrawal behaviour. Moreover, social media platforms provide the facility of publicness in the shape of privacy management (Chen, 2018).

The social media provide liberating substantial social space for expressing views and discourse in the shape of different channels i.e. Facebook, Twitter, WhatsApp status, YouTube, Instagram, Blogs and etc. (Chininga, et al, 2019; Fox & Holt, 2021). Communication scholars have maintained that people feel more expressive online contrary to face-to-face (Shin, et al (2022). Similarly, studies have suggested that people often exhibit greater expressiveness online than in face-to-face interactions (Goldenberg & Gross, 2020). Although, the applications of the spiral of silence are very robust both offline (Shanahan, 1997) and online (Fox & Holt (2021; Matthes, et al., 2018) but still there is a growing number of studies which argue that silence phenomenon is being decreased online (Chen, 2018). The inconsistent findings of the scholarships encourage the researcher to see the phenomenon of spiral of silence under the social media atmosphere in the presence of moderators and mediators (Chen, 2018; Al-Kandari, et al., 2022). This study tried to investigate the spiral of silence process by using two dimensions internal (fear of social isolation, willingness of self-censorship and religiosity).

The impact of the Spiral of Silence theory on social media platforms has far-reaching implications, as highlighted in several past studies. Gearhart and Zhang's (2018) work (Gearhart & Zhang, 2018), for instance, indicated that fear of isolation on social media platforms might lead individuals to withhold their opinions. Moreover, studies like the one conducted by Hong, (2020) suggest that individual characteristics such as religiosity might influence the likelihood of expressing one's views, even when they deviate from the perceived majority opinion (Hong, 2020). Burnett, (2022) found that FSI significantly predict the WTSC. Similarly, Fox & Holt (2018) discovered that social media platform encourages the respondents to reduce the fear of isolation and speak out the social issue. Chen (2018) discovered that WTSC encourage the person to withdrawal his behavior on social media. Al-Kandari, et al. (2022) emphasized that at internal level religiosity should be checked in the spiral of silence process. Meanwhile, Al-Kandari, et al., (2022) high level of religiosity encourage the respondents to speak out in political issues. Burnett, (2022) also discovered that disagreement and publicness play a moderating role in spiral of silence. Similarly, Chen (2018) also found that political disagreement and publicness moderated the relation between FSI and WTSC on social media platform. Religiosity is considered to be very influential variable in Pakistani Society. The findings of Al-Kandari, et al. (2022) imply the significant addition to the spiral of silence theory as those who self-report a high level of religiosity indicates a willingness to speak out and voice their opinion in a less than favorable climate of public opinion. The objective was to scrutinize the complex dynamics between the Spiral of Silence theory and the context of social media platforms, with a specific focus on the roles of religiosity.

2. Literature Review

Fear of isolation (FSI) plays crucial part in spiral of silence process which spark the process of observing the opinions of majority and refrain the individuals to express their behaviors if it does not suit to the views of the masses (Noelle-Neumann, 1974). Noelle-Neumann (1993) also observed that there are some hardcore people as well in the society who don't bother the FSI. However, Chen (2018) maintained that there are some people who always worried about FSI but there are also some people who don't bother but still if they observe the unfriendly atmosphere they feel reluctant to express their opinion (Chen, 2018).

Sohn (2019) used agent-based modeling (ABM) to explore the conditions under which social networks and mass media interact to facilitate or hinder the emergence of large-scale spirals of silence. Both studies found that the spiral of silence might be locally observable in a networked environment, but not likely on a global scale (Renner, 2019; Sohn, 2019). Shin and Kwahk (2019) combined the Spiral of Silence Theory and Impression Management Theory to examine the process of public opinion formation on social media. Their study showed that the fear of negative evaluation affected individuals' intention to express their opinions on social networking sites (SNS), and SNS self-expression propensity influenced the intention to engage in public opinion expression. The study by Chen (2018) used two-wave panel data from Hong Kong to expand the Spiral of Silence theory. This research examined both supportive and disagreeing opinions, and both expression and withdrawal behaviors (WB) on social media. The results suggested that the fear of social isolation (FSI) discouraged disagreeing opinion expression and encouraged withdrawal behaviors, both mediated by a willingness to self-censor. These effects were found to be moderated by the level of disagreement and publicness in the individual's network (Chen, 2018). Burnett, (2022) found that FSI significantly predict the WTSC.

Similarly, Fox & Holt (2018) discovered that social media platform encourages the respondents to reduce the fear of isolation and speak out the social issue. Adding to these findings, Masullo & Duchovnay (2022) used interview data to propose a typology of political self-silencing, which expanded upon the Spiral of Silence theory. According to this research, people surveilled not just their broader societal context, but also individual actors and specific conversations when deciding whether to speak out Chen (2018) discovered that WTSC encourage the person to withdrawal his behavior on social media. Glynn et al. (1997) conducted the meta-analysis in the field of spiral of silence and investigated that supportive opinion which can be in the shape of publicness encourage the person to speak out. Similarly, Matthes et al. (2017) observed a significant direct relationship between publicness and expressing the behavior. Al-Kandari, et al. (2022) emphasized that at internal level religiosity should be checked in the spiral of silence process. Meanwhile, Al-Kandari, et al. (2022) high level of religiosity encourages the respondents to speak out in political issues. Religiosity is considered to be very influential. Burnett (2022) also discovered that disagreement and publicness play a moderating role in spiral of silence.

Chen (2018) study found that fear of isolation is a significant factor in encouraging withdrawal behavior on social media. His research discovered a clear correlation between the fear of isolation and a person's propensity to withdraw from social media engagement. This correlation was further corroborated by Masullo & Duchovnay (2022), whose interviewees acknowledged that they took into consideration not just the broader societal context but also individual actors and specific conversations when deciding whether to express their views. Pitcairn (2022) also suggested that the social isolation is a key factor in withdrawal behavior. Similarly, Momeñe et al. (2022) study also provide significant evidence that fear of loneliness and social isolation are significantly associated with each other.

Turning to the second hypothesis again Chan (2018) strongly supports the second hypothesis, his study revealed that the fear of social isolation discouraged individuals from expressing dissenting opinions, leading them to self-censor. Shin and Kwahk (2019) uncovered another dimension of this phenomenon and their research found that this particular fear could significantly influence an individual's intention to express their opinions on social networking sites, thereby underlining another aspect of self-censorship.

In delving into the complexities of these relationships, it becomes crucial to account for the influence of religiosity. Even though no specific studies explicitly investigate religiosity as a moderating factor, the relationships observed in other identity-based factors warrant its consideration. Support for this view can be extrapolated from studies like that conducted by . Their research, conducted in a political charged environment such as Pakistan, Javeed et al. (2022) demonstrated that social media platforms can provide a space for individuals to voice their opinions on controversial topics. The implication here is that, in environments where expressing divergent views might attract repercussions, social media serves as a vital outlet for free expression. However, the fear of isolation and potential social sanctions could still act as deterrents, leading to self-censorship and withdrawal behaviors. The "Spiral of Silence" effect studied by An et al. (2023) further supports this notion. This effect, where individuals refrain from expressing minority views for fear of isolation, could be accentuated within religious contexts. Given the potent influence religion wields over communal norms and individual behaviors, the fear of isolation could become a significant factor compelling individuals to self-censor their opinions and possibly withdraw from discussions that challenge their religious beliefs.

Religiosity's role as a moderating factor is not explicitly studied, it emerges as a plausible and influential variable in the relationship between fear of isolation, self-censorship, and withdrawal behaviors on social media. Further research is warranted to understand the nuances of this relationship better, given the potential impact on both individuals' freedom of expression and the broader dynamics of online communities.

H1: Fear of social isolation leads to willingness to withdrawal behavior.

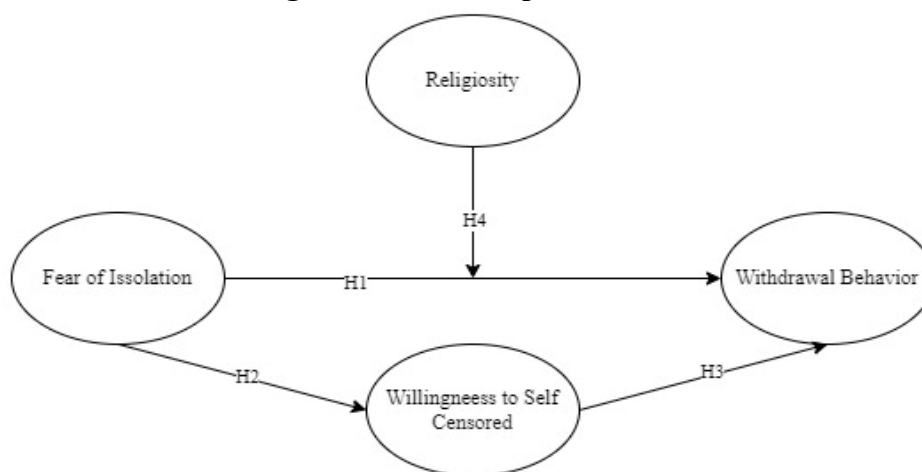
H2: Fear of social isolation leads to willingness of self-censored.

H3: Willingness to self-censored leads to withdrawal behavior

H4: Willingness to self-censored mediates the relationship between fear of isolation and withdrawal behavior.

H5: Religiosity moderates the relationship between fear of social isolation and withdrawal behavior.

Figure No 1: Conceptual Model



3. Methodology

3.1 Research Design

The study was aimed to investigate the mediating and moderating role of willingness to self-censor, and religiosity on fear of social isolation and withdrawal behavior. The study used mono method cross sectional quantitative study. In quantitative studies, survey methods are largely used in testing the relationship or prediction or causation in the field of media (Gunter, 2000). So, the survey was carried out in this study and the data was collected by electronic survey methods by using google forms, link was created and distributed on the different platforms to get the data because of the pandemic situation in the country. The population of the study was the students of the different universities of the Lahore. By using the convenience sampling technique, data was gathered. It was observed that only 384 responses were valid. So, after missing analysis and checking the reliability and validity further analysis was conducted.

3.2 Measurement

All the constructs, that was used in the survey were adopted from different, published work. The measurement of fear of social isolation has been adopted from Shim (2019) and the following five statements has been asked on 1=strongly disagree to 7=strongly agree from the respondents in the reference of their social media use. Items are as follow: (1) “It is scary to think about not being invited to social gatherings by people I know” (2) “One of the worst things that could happen to me is to be excluded by people I know”(3) “It would bother me if no one wanted to be around me”(4) “I dislike feeling left out of social functions, parties, or other social gatherings” (5) “It is



important to me to fit into the group I am with” (p. 447). Willingness of self-censor measurement is based on how respondents withhold their opinion on expressing on social media. Respondents were asked five items in the context of social media on 1=strongly disagree to 7=strongly agree adopted from Chen (2018). The items are as follow: (1) “It is difficult for me to express my opinion if I think others won’t agree with what I say” (2) “There have been many times when I have thought others around me were wrong but I didn’t let them know” (3) “When I disagree with others, I’d rather go along with them than argue about it” (4) “I’d feel uncomfortable if someone asked my opinion and I knew that he or she wouldn’t agree with me” and (5) “I tend to speak my opinion only around friends or other people I trust.” (p. 3926). For measurement of withdrawal behaviors, three items were asked according to social media to rate on a scale of 1=never to 4=often adapting from Chen (2018). Which are as follow: how often they (1) delete their posts or comments (2) “edit their posts”, and (3) “ask people to un-tag them from a post”. (p. 3926).

Participants asked to answer ten questions on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items for religiosity adapted from Toussaint, et al. (2021). Sample items are as follow:(1) “My religious beliefs lie behind my whole approach to life.” (2) “I spend time trying to grow in the understanding of my faith.” (3) “It is important to me to spend time in religious thoughts and reflections.”...

4. Analysis

There were 384 valid responses in the data, in which 65% of the respondents were males and 35% were females. For education level 70 percent of them were graduate and 30% were post graduate as the survey was conducted for students. Moreover, 70% were from urban area and 30 % were from rural area. To test the suggested hypotheses, the PROCESS macro for SPSS (Hayes, 2013) and template four were used to measure the direct effect of Fear of social isolation and Willingness to self-censor, and direct effect of willingness of self-sensor on withdrawal behavior with 5,000 bias- corrected bootstrap sample and 5% level of significance was also employed. It is noted that statistical significance is achieved at $p < 0.05$ when the upper bound and lower bound does not include zero. Moreover, using process version 3.5, model 7 and 14 from template was chosen for moderated mediation and mediated moderation hypothesis.

In the studied sample of 384 participants, in which 53.4% females and 46.6% males. Residentially, 89.8% of participants lived in urban regions, while 10.2% were from rural areas. Age-wise, the largest bracket was 18-24 years (46.6%), followed by the 25-34 years group (28.1%), and those 45 years or older made up 20.1%. On the education front, 46.6% held a Bachelor's degree and 34.9% had a post-graduate degree. The employment status was diverse with 45.1% employed, 37.0% unemployed, and 18.2% students. The sample was primarily single (80.2%) and the rest were married or in domestic partnerships (19.8%). Most participants used social media multiple times daily (95.1%), with 4.9% using it once daily. Finally, 95.1% were followers of Islam, while the remaining 4.9% practiced other religions.

Table No 1: Demographics

Variable	Category	Frequency (%)
Gender	Male	179 (46.6)
	Female	205 (53.4)
Residential Region	Rural	39 (10.2)
	Urban	345 (89.8)
Age	Under 18	20 (5.2)
	18-24	179 (46.6)
	25-34	108 (28.1)
	35-44	20 (5.2)
	45 or older	77 (20.1)
Education Level	Some high school	20 (5.2)
	High school graduate or equivalent	32 (8.3)
	Some college	19 (4.9)
	Bachelor's degree	179 (46.6)
	Post-graduate degree	134 (34.9)
Employment Status	Employed	173 (45.1)
	Not employed	142 (37.0)
	Student	70 (18.2)
Marital Status	Single, never married	308 (80.2)
	Married or domestic partnership	76 (19.8)
Social Media Usage	Several times a day	365 (95.1)
	About once a day	19 (4.9)
Religion	Islam	365 (95.1)
	Others	19 (4.9)
	Total	384 (100.0)

Table 2 shows the descriptive measures and Cronbach alpha value of the constructs. withdrawal behavior (WB) have (M=2.32, SD= 0.76, Alpha= 0.73), Willingness to self-censor (WSC) (M=3.68, SD=1.5, Alpha=0.86), fear of social isolation (FSI) have (M=2.95, SD= 1.5, Alpha= 0.83), Religiosity (M= 6.2, SD= 0.95, Alpha= 0.87). All the constructs have more than 0.70 Cronbach alpha value, as in social sciences for internal consistency of the constructs Cronbach alpha is largely used in which value above 0.70 is considered good.

The Pearson Correlation analysis was conducted to examine the relationships between Fear of Social Isolation (FSI), Willingness to Self-Censor (WSC), Withdrawal Behaviors (WB), and Religiosity. There was a moderate, positive correlation between FSI and WSC ($r = .363, p < .01$), indicating that as fear of social isolation increased, the willingness to self-censor on social media also increased. A weaker, but statistically significant positive correlation was found between FSI and WB ($r = .123, p < .05$), suggesting that increased fear of social isolation was also linked to greater likelihood of withdrawal behaviors on social media. Interestingly, small but significant



negative correlation was observed between FSI and Religiosity ($r = -.137, p < .01$), suggesting that as fear of social isolation increased, religiosity decreased. Religiosity was also positively correlated with WSC ($r = .204, p < .01$), indicating that more religious individuals were more likely to self-censor on social media. However, the correlation between Religiosity and WB was very small ($r = -.10, p < .05$).

Table 2: Descriptive Statistics

	N	Mean	SD	Items	Alpha
FSI	384	2.9516	1.46430	5	0.83
WTSC	384	3.6818	1.49648	5	0.86
WB	384	2.3186	.76481	3	0.73
Relig	384	6.1175	.95263	10	0.87

Table 3: Correlation Matrix

	FSC	WTSC	WB
WTSC	.363**		
WB	.123*	.327**	
Rel	-.137**	.204**	-.10*

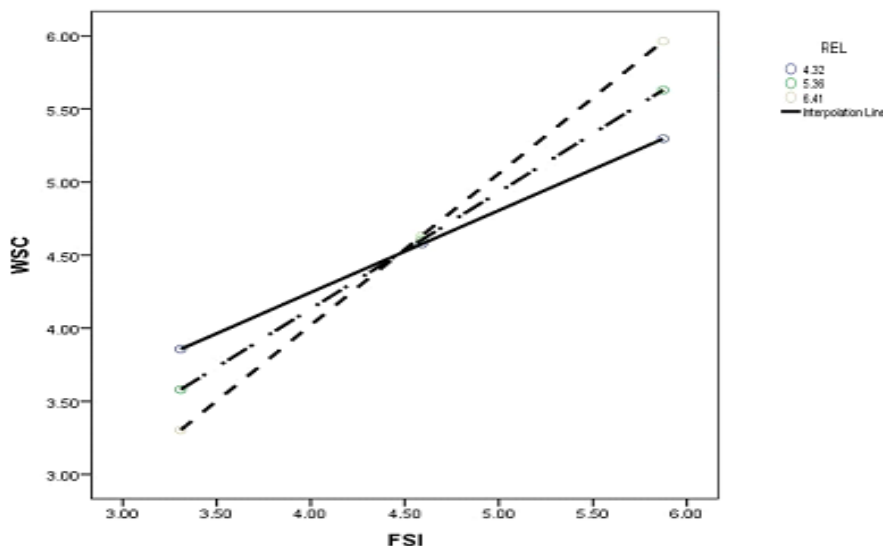
4.1 Hypothesis Testing

People who are afraid of social isolation more likely to withdraw behavior on social media. In H1, there is also very strong support that fear of social isolation significantly predicts the withdrawal behavior as ($b=0.1652, t=3.82, p<0.0002, LLCI=0.08, ULCI=0.2505$). It means in a single unit change of fear of social isolation causes the 0.1652 change in withdrawal behavior on social media. In H2, it is observed that, people who have more fear of social isolation are more likely to willingly self- censor their thoughts on social media as ($b=0.8223, t=17.38, p<0.000, LLCI=0.7291, ULCI = 0.9155$). so, by change in single unit of fear of isolation causes the 0.82 change in the willingness to self-censor. In this case, Hypothesis 2, fear of isolation leads to self-censored is supported as there is no evidence to reject it at 5% level of significance, hence fear of isolation leads to willingness to self-censor. In H3, People who willingly censor their emotions more likely to withdrawal their behaviour on social media Hypothesis three also supported as ($b=0.2316, t=5.9011, p<0.0000, LLCI=0.1543, ULCI=0.3089$). it is observed that in a single unit change of willingness to self censor causes 0.2316 unit change in withdrawal behaviour.

Self-censor behavior mediates the relationship between fear of social isolation and withdrawal behavior. H4 is also supported as in the presence of mediator the direct effect is ($0.1652, CI [0.2950, 0.4163]$) and indirect effect is ($0.1904, CI[0.1226, 0.2595]$). There is no zero

value between the confidence interval, so we conclude that willingness to self-censor mediates between fear of social isolation and withdrawal behavior.

Figure No 2: Religiosity moderation



In H5 interaction effect of religiosity and fear of social isolation significantly creating impact on withdrawal effect through willingness to self-censor as (interaction effect= 0.1787, [0.1059, 0.2514]. it is also noted that religiosity is significant throughout its all three mean values. Which is also depicted in figure 1. Hence, Religiosity significantly effect the relationship between Fear of isolation and withdrawal behavior.

5. Conclusion and Discussion

In conclusion, the analysis conducted on the dataset provided offers valuable insights into the relationships between fear of social isolation, withdrawal behaviors, religiosity, publicness, and their potential interplay. The findings highlight the complex dynamics of individuals' behaviours and experiences in online social environments.

In this study, researcher tried to understand the spiral of silence process in the age of digital media platform, as digital media provides its unique affordances of publicness. The study found that there is a very strong relationship between fear of social isolation and withdrawal behavior. Similarly, it is also found that willingness to self-censor mediates the relationship between fear of social isolation and withdrawal behavior. The findings of the study resonate the effect of spiral of silence as well in the presence of social media platform. The study also found that there is a significant interaction effect exists in the presence of religiosity with fear of social isolation. In this way, the study confirms the findings of Chen (2018) findings. The positive correlation between fear of social isolation (FSI) and publicness suggests that individuals experiencing higher levels of fear of isolation may also exhibit a higher degree of openness in public forums and online



interactions. This may seem counterintuitive at first, as one might expect individuals with fear of social isolation to be more cautious and reserved in their online behaviour. However, it is important to consider that individuals may engage in publicness as a way to seek social validation, connect with others, or alleviate their feelings of isolation. By being more open and visible in public forums, individuals may hope to attract attention, recognition, or support from others, thereby mitigating their fear of social isolation (Raza et al., 2021). Religiosity appears to have a complex role in the relationship between fear of social isolation and withdrawal behaviours. It can serve as a protective factor against social isolation by providing social support and a sense of belonging within religious communities. Simultaneously, higher religiosity may be associated with a greater inclination to self-censor on social media platforms, potentially influenced by religious values, norms, and the desire to maintain a positive image. However, withdrawal behaviours on social media may be influenced by a multitude of factors beyond religiosity alone. Further research is necessary to explore the interplay of religiosity with other variables and to understand the cultural and contextual nuances shaping these relationships (Maier et al., 2023).

5.1 Limitations and Recommendations

Although this study found some interactive findings but have many limitations. As in the pandemic situation the survey was conducted through online, valid sample size reduced to students and very small. Moreover, specific issue should also include regarding withdrawal behavior. It is also observed that Pakistani society is very enthusiastic about showing their religiousness, so it is very difficult to choose it as a moderator, so its effect can be increased by increasing sample size to add more heterogeneity in the sample frame.

6. References

- Al-Kandari, A. A., Frederick, E., Hasanen, M. M., Dashti, A., & Ibrahim, A. (2022). Online Opinion Expression about Women Serving as Judges among University Students in Egypt and Kuwait: An Integrative Study of the Spiral of Silence and Uses and Gratifications. *Electronic News*, 16(2), 104-138.
- Brady, W. J., McLoughlin, K. L., Torres, M. P., Luo, K. F., Gendron, M., & Crockett, M. J. (2023). Overperception of moral outrage in online social networks inflates beliefs about intergroup hostility. *Nature human behaviour*, 1-11.
- Burnett, A., Knighton, D., & Wilson, C. (2022). The Self-Censoring Majority: How Political Identity and Ideology Impacts Willingness to Self-Censor and Fear of Isolation in the United States. *Social Media+ Society*, 8(3), 20563051221123031.
- Burnett, A., Knighton, D., & Wilson, C. (2022). The Self-Censoring Majority: How Political Identity and Ideology Impacts Willingness to Self-Censor and Fear of Isolation in the United States. *Social Media+ Society*, 8(3), 20563051221123031.



- Capriotti, P., Zeler, I., & Camilleri, M. A. (2021). Corporate communication through social networks: The identification of the key dimensions for dialogic communication. *Strategic corporate communication in the digital age*, 33-51.
- Chaudhry, I., & Gruzd, A. (2020). Expressing and challenging racist discourse on Facebook: How social media weaken the “spiral of silence” theory. *Policy & Internet*, 12(1), 88-108.
- Chen, H. T. (2018). Spiral of silence on social media and the moderating role of disagreement and publicness in the network: Analyzing expressive and withdrawal behaviors. *New Media & Society*, 20(10), 3917-3936.
- Chia, S. C., & Tu, C. (2020). Screw the majority?: Examining partisans’ outspokenness on social networking sites. *Journal of Information Technology & Politics*, 1-15.
- Chininga, T., Rungani, E., Chiliya, N., & Chuchu, T. (2019). Facebook Communication and Marketing Influence on Decision-Making and Choice of University Student Representatives: A Student's Perspective. *Romanian journal of communication & public relations*, 21(2).
- Dienlin, T., & Metzger, M. J. (2016). An extended privacy calculus model for SNSs: Analyzing self-disclosure and self-withdrawal in a representative US sample. *Journal of Computer Mediated Communication*, 21(5), 368-383.
- Duncan, M., Pelled, A., Wise, D., Ghosh, S., Shan, Y., Zheng, M., & McLeod, D. (2020). Staying silent and speaking out in online comment sections: The influence of spiral of silence and corrective action in reaction to news. *Computers in Human Behavior*, 102 (4), 192-205.
- Fox, J., & Holt, L. F. (2018). Fear of isolation and perceived affordances: The spiral of silence on social networking sites regarding police discrimination. *Mass Communication and Society*, 21(5), 533-554.
- Fox, J., & Holt, L. F. (2021). Fear of isolation and perceived affordances: The spiral of silence on social networking sites regarding police discrimination. In *Social Media News and Its Impact* (pp. 147-168). Routledge.
- Goldenberg, A., & Gross, J. J. (2020). Digital emotion contagion. *Trends in cognitive sciences*, 24(4), 316-328.
- Heyd, T. (2021). Tertiary orality? New approaches to spoken CMC. *Anglistik*, 32(2), 131-147.
- Hong, S. C. (2020). A cross-cultural study of the spiral of silence Theory with individualism-collectivism and uncertainty-avoidance. *The Journal of the Korea Contents Association*, 20(3), 286-297.
- Masullo Chen, G., Muddiman, A., Wilner, T., Pariser, E., & Stroud, N. J. (2019). We should not get rid of incivility online. *Social Media+ Society*, 5(3), 2056305119862641.



- Masullo, G. M., & Duchovnay, M. (2022). Extending the Spiral of Silence: Theorizing a Typology of Political Self-Silencing. *Communication Studies*, 73(6), 607-622. <https://doi.org/10.1080/10510974.2022.2129401>
- Masullo, G. M., Lu, S., & Fadnis, D. (2020). Does online incivility cancel out the spiral of silence? A moderated mediation model of willingness to speak out. *New Media & Society*, 1461444820954194.
- Momeñe, J., Estévez, A., Griffiths, M. D., Macía, P., Herrero, M., Olave, L., & Iruarrizaga, I. (2022). Eating disorders and intimate partner violence: the influence of fear of loneliness and social withdrawal. *Nutrients*, 14(13), 2611.
- Naploi, P. (2010). Revisiting ‘Mass Communication’ and the ‘Work’ of the audience in the New Media Environment. *Media. Culture & Society*, 32(3), 505–516. doi: 10.1177/0163443710361658
- Noelle-Neumann, E. (1974). The spiral of silence: A theory of public opinion. *Journal of Communication*, 24, 43–51. doi:10.1111/j.1460-2466.1974.tb00367.x
- Noelle-Neumann, E. (1993). *The spiral of silence: Public opinion, our social skin* (2nd ed.). Chicago, IL: University of Chicago Press.
- Papa, V., & Photiadis, T. (2021). Algorithmic curation and users’ civic attitudes: A study on Facebook news feed results. *Information*, 12(12), 522.
- Pitcairn, S. R. (2022). *Effects of Early Social Isolation and Adolescent Single Prolonged Stress on Anxiety-Like Behaviors and Ethanol Self-Administration in Female Rats* (Doctoral dissertation, Wake Forest University).
- Sarwar, M. S., Ramazan, T., & Shafiq, J. (2021). Television and political awareness: Measuring the impact of political talk shows on political participation of students of Lahore. *Journal of Media Studies*, 36(1).
- Shim, K. (2019). Does fear of isolation disappear online? Attention-seeking motivators in online political engagement. *Media and Communication*, 7(1), 128-138.
- Shin, D. I., Lim, Y. W., & Kwahk, K. Y. (2022). SNS users' opinion expression: Focusing on suppression effect in spiral of silence. *Telematics and Informatics*, 72, 101859.
- Sohn, D. (2022). Spiral of silence in the social media era: A simulation approach to the interplay between social networks and mass media. *Communication Research*, 49(1), 139-166.
- Sude, D. J., Knobloch-Westerwick, S., Robinson, M. J., & Westerwick, A. (2019). “Pick and choose” opinion climate: How browsing of political messages shapes public opinion perceptions and attitudes. *Communication Monographs*, 86(4), 457-478.
- Toussaint, L., Fox, J., Kamble, S., Worthington Jr, E. L., Cashwell, C. S., & Picciotto, G. (2021). Initial psychometric properties of the Spiritual Bypass Scale in an Indian college student sample. *Psychology of Religion and Spirituality*, 13(1), 63.



Žerebecki, B. G., Oprea, S. J., Hofhuis, J., & Janssen, S. (2021). Can TV shows promote acceptance of sexual and ethnic minorities? A literature review of television effects on diversity attitudes. *Sociology compass*, 15(8), e12906.