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Invariance analysis of causal relationship model of self-disclosure in social media of generation Y and Z: A case of collectivism country

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Abstract

The objectives of this study were: (1) to study the relationship among all observed variables with a self-disclosure model; (2) to test the structural equation model of generations Y and Z; and (3) to analyze the direct, indirect, and total effects of the Structural Equation Modelling (SEM) of self-disclosure, and to test the invariance of the SEM between generations Y and Z during COVID-19 in collectivism within a country. A sample cohort of 804 participants was examined by a 6-scale questionnaire. The data were analyzed by using descriptive statistics, confirmative factor analysis, correlation coefficient, structural equation modeling, and invariance analysis. The results showed that the model was an acceptable fit with the empirical data by Chi-square = 1712.23, $df = 290$, $p = .00$, $\chi^2/df = 5.90$, GFI = 0.85, AGFI = 0.82, RMSEA = 0.07 and SRMR = 0.07. The model of social influence, emotional intelligence, digital intelligence, and self-esteem affecting self-disclosure indicated variance of parameters in the matrix of causal effects between: (1) endogenous latent variables and latent exogenous variables to endogenous latent variables; and (2) variance-covariance of the latent exogenous variable and variance-covariance of error, across generations. The result leads to the recommendation that parents, guardians, organizations, and leaders need to comprehend the generation preferences such as styles, emotional intelligence, and self-esteem, as well as endorse digital intelligence, and group cohesion among these generation cohorts, which will strengthen positive self-disclosure and not falling victim to cybercriminals.

Introduction

The COVID-19 pandemic has changed how people interact with online social media. Home isolation, self-quarantine, and social distancing are prevailing stimulants for people to change from onsite to online, which seems to be an evolving phenomenon (Nabity-Grover et al., 2020). As a result, these transitions have encouraged people to spend more time on social media platforms to connect and engage with family, friends, organizations, and others. The research revealed more than a 40 percent increase on Facebook and 70 percent on Instagram.

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In China, Weibo and WeChat increased 58 percent, and in the U.S.A. Children (age 4–15) consumed 13 percent on screen for YouTube, and 16 percent on TikTok (Vizcaya-Moreno & Pérez-Cañaveras, 2020). Social media users increased more than 9.9 percent or 400 million over past 12 months. It has slowed slightly more recently; however, the global usage is increasing by more than 1 million per day (Statista Research Department, 2021). The report also shows an active social media penetration in collectivist countries in the Asia Pacific; South Korea (89.3%), Malaysia (86%), Hong Kong (85.6%), Singapore (84.4%), Taiwan (82.6%), Philippines (80.7%), Mongolia (78.7%), Thailand (78.7%), Japan (74.3%), Vietnam (73.7%), and Cambodia (71.3%) are increasing respectively. Moreover, Asia has the strongest social media consumption where Eastern Asia (1,065.88 million users), Southeast Asia (482.73 million users), Southern Asia (470.01 million users) are the top three compared to other continents of Northern America (329.25 million users), South America (274.22 million users), and Central & Western Europe (198.07). This indicates that social media consumption in collectivism countries has dramatically grown, especially China, India, Indonesia, and Japan. The longest time spent on social media is in the Philippines, Indonesia, Malaysia, Thailand, and India respectively. In addition, Facebook, YouTube WhatsApp, Instagram, Facebook Messenger, WeiXin's, WeChat, TikTok are the most widespread social network usages (Statista Research Department, 2021).

Spending an extremely long time on social media causes psychological problems. According to Gao et al. (2020), mental problems such as stress, anxiety, and CDA (combination of depression and anxiety) have a positive relationship to media exposure. Users frequently described 80 percent of self-disclosure on social media during the COVID-19 outbreak. In China, the highest proportion of self-disclosure on social media was by adolescents (less than 20). Furthermore, interactive technologies that facilitate and simplify the content creation and sharing of ideas, information, knowledge, and interests, as well as other varieties of disclosure through a virtual network have challenged humankind since the instigation of Web 2.0 Internet-based social media enabled the user-generated content era (Aichner et al., 2021). These interactive platforms are challenging the relationship among humans, information, and technology, which enables the sharing, discussion and participation in the cyber world, such as TikTok, Instagram, Facebook, YouTube, LINE, WeChat, Snapchat, Pinterest via blogs, videos, gaming sites and podcasts etc., which also affects the offline world of younger generations. Those platforms play a role in creating a digital environment that provides an image of both the positive and negative sides of youthful users around the world. This has become a new critical concern for parents and teachers as well as psychologists. Thus, the age of usage must be considered for further examination in aspects of self-disclosure in psychological points. The factors that need to be considered, for instance, digital literacy, are required by all ages in order not to be a victim of bullying or cybercrime across generations. Moreover, social influence essentially contributes to cyber self-disclosure such as recognition, monetary, and dating. Luo and Hancock (2020) said that self-disclosure affects psychological well-being and individual self-esteem. This is consistent with Lyvers et al. (2020), who found that the more disclosure of one's self, the more it leads to alexithymia, impulsivity, negative mood, depression, stress, and alcohol usage. To handle the cyber world, emotional intelligence is necessary to elicit emotional connections based on the sentiment analysis of online social interacting data, and the ability to monitor one's feelings as well as filter out what should be trusted or believed, as well as to not become a victim or commit any harmful acts or interactions while using social media.

These were the considerations that influenced this study which attempts to better understand the social media user's self-disclosure behavior by examining the influential antecedents associated with personal self-disclosure via social influence, EQ, digital intelligence (DQ), and self-esteem Gen Y and Z in collectivist countries during COVID-19 era. Thus, the objectives of this study were to (1) study the relationships among all observed variables of social influence, EQ, DQ, and self-esteem with self-disclosure model, (2) test the structural equation model of Gen Y and Z, and (3) analyze the direct, indirect, and total effects of the SEM of self-disclosure, including the invariances of the self-disclosure across Gen Y and Z in a collectivist country.

Literature Review

Social Media Self-Disclosure

Social media self-disclosure refers to purposely revealing personal information about oneself, biographical, personal identity, belief, attitude, and mindset information for interacting with others online (Oghazi et al., 2020). Nabity-Grover et al. (2020) stated that the cost antecedents of online self-disclosure are privacy risk, perceived anonymity, and benefits such as

convenience for relationship maintenance and building, enjoyment, and self-presentation. Online self-disclosure was first studied in the integration of communication and psychology fields regarding online interaction, privacy, cyber security, and social issues of dating, discussion fora, and instant messaging. Research revealed the social media self-disclosure is associated with negative consequences such as envy, loneliness, and wellbeing, in conjunction with revealing sensitive personal information, attitude or strong belief, which makes the individual liable to hacking, fraud, stalking, and extortion. (Lyvers et al., 2020).

At the individual level, self-disclosure develops self-identity and promotes friendship but with varying levels of satisfaction regarding the depth and breadth level of the disclosures, and the duration, which impact the closeness and affection of spousal relationships. Social penetration theory (SPT) can be applied to explain how data and information exchange functions and can contribute to the dissolution of the relationship. Social penetration theory is defined as the procedure of attachment that changes a relationship from superficial to more intimate, especially accomplished through "self-disclosure" and diverges in different contexts i.e., romantic relationship, work relationship, friendship, and social groups (Altman & Taylor, 1973). According to Posey et al. (2010), there are five dimensions that include amount, depth, honesty, intent, and valence, while Varnali and Toker (2015) argued that self-disclosure is divided into two dimensions namely potentiality stigmatizing information such as thinking, affection, opinion, and disclosure honesty and interpersonal status. Similarly, Carpenter and Greene (2016) provided a metaphor for self-disclosure similar to an onion model where the "outer layer" is people's visibility expressed to the public and self-image. As the superficial layer, people disclose objectively shallow information regarding preferences or non-preferences, favor or disfavor in general. Then, social attitude perspectives, beliefs, political standpoints are medium layers. Finally, is the "innermost layer", whereby people provide intimate details about privacy and values to significant persons e.g. hopes, secrets, deep fears, spiritual values, core personality. Altman and Taylor (1973) divided the four steps of the development of self-disclosure into: (1) orientation, public disclosure; (2) exploratory affective; (3) affective exchange; and (4) stable exchanges including mutual expectation and deep privacy. In a collectivistic culture, the level of online disclosure is divided into general information and picture self-description (Liu & Brown, 2014). Chang and Heo (2014) divided the level of online disclosure into basic, sensitive, and highly sensitive. Furthermore, Bolar (2009) specified the level of self-disclosure to include self-regulation and image building, utility, information gathering and problem, networking, spending leisure time, revisiting memories, and peer influences. However, recent research revealed factors affecting social media's self-disclosure are social influences, self-esteem, emotional intelligence, and digital intelligence (Santisi et al., 2020; Veldhuis et al., 2020; Wuttaphan, 2022).

Social Influences

As self-disclosure is varied in conformity with social environments, social influence and social subjective norms contribute to disclosure. Kelman (1958) identified three social influences of compliance, identification, and internalization. So, social influence refers to a set of thinking and behavior modified by others in a form of conformity, pressure, obedience, and persuasion (Friedkin & Johnsen, 2011). Persuasion refers to a process of guiding to individual adjustment or changes in attitude appeals to reasons or emotions where characteristics of the requester and convincing content are the critical factors affecting persuasion. Conformity involves a change in thinking, belief, and behavior aligning the response of others and normative standards influenced by peers, ambiguity, self-confidence, objectives, and group harmony. Compliance refers to replying favorably to explicit and implicit appealed bargains offered by others for expected rewards, penalty, guilt, the door-in-the-face or the foot-in-the-door technique, where people could comply with others, and obedience derived from authority-based to command and order an individual to behave and act purposefully by using expert power, referent power, legitimate, reward, and coercive power. The factors affecting social influence include group sizes, unanimity, task difficulty, fear of rejection from the group (Asch, 1956).

The mechanism of social influence fundamentally encourages online users to maintain meaningful social connections. People abide by social norms and groups through social exchanges and reciprocity, for example, cultivating trust or positive relationships, and, according to the research, a greater number of people perceived similarity or superficial matches as a greater cue for acquaintanceship and reciprocation i.e. commercial exchange, including door-in-the-face technique, a process of "rejection-then-moderation", producing a substantial increase in compliance with a target requested by the requester to create legitimate concessions (Cialdini et al., 1975), especially in social media. This was confirmed by

Wuttaphan (2022), who found that social media self-disclosure by Gen Y and Z was influenced by conformity, obedience, and persuasion on the TikTok application.

Self-Esteem

Individual self-esteem refers to the subjective evaluation of self-worth, respect, integrity, and self-concept that encompass one's belief, including emotional states which predict certain outcomes of achievement, wellbeing, overall life satisfaction. People with self-esteem tend to have a positive self-image, strong personality, as well as being humble, cheerful, open to criticism, with a high EQ, and psychological capital that contributes to psychological well-being and mental health (Gujar & Ali, 2019). Low self-esteem, however, tends to create socially anxious, introverted, shy, and lonely individuals with less life satisfaction, and who are pessimistic, are problematic in social relationships, which contribute to mental problems, social rejection, acts of violence, depression, out-group derogation through a collective narcissism, stresses, teenage pregnancy and suicide. Predominant factors that affect self-esteem are divided into internal characteristics i.e. physical attributes, general capacity and performance, affective states, self-values, gender, and aspiration. External factors are parenting styles, schooling, socioeconomics, friends, and social circumstances (Coopersmith, 1981). However, research revealed that self-efficacy and esteem, openness and personality are antecedents to self-disclosure, and the longitudinal evidence showed that social relationships, social acceptance reciprocating correlate to self-esteem (Harris & Orth, 2020). Veldhuis et al. (2020) delineated that a worsened body image, higher self-objectification, and lower self-esteem are associated with greater engagement with selfie behaviors on social network online.

Emotional Intelligence

Emotional intelligence, or emotional quotient, is defined as a person's capability to perceive, evaluate and recognize individual and others' sentiment to construct motivation, self-control, and life satisfaction (Bariso, 2020). Salovey and Mayer (1990) defined *"emotional intelligence as the ability to monitor one's own and others' feeling and emotion, to discriminate among them and to use this information to guide one's thinking and actions"* (p.189). EQ includes four dimensions of self-awareness, social awareness, self-management, and relationship management (Goleman, 1998). However, Thailand's Department of Mental Health (2000) defined EQ as the ability to comprehend, realize one's own and others' emotions, desires, feelings, and stress, and be able to handle problems or crises appropriately and positively. EQ comprises nine dimensions, including self-regulation, empathy, responsibility, self-motivation, problem-solving, interpersonal relationships, self-esteem, life satisfaction, and post-traumatic growth. Moreover, high EQ people are more careful in disclosing or posting private information online. Individuals with high EQ are creative, with high work performances, high psychological capital and wellbeing, which accompanies positive behavior (Santisi et al., 2020).

Digital Intelligence

With the ongoing COVID-19 pandemic, the number of digital platform users has substantially increased (Barry et al., 2021). DQ Institute (2019) defined DQ as *"a comprehensive set of technical, cognitive, meta-cognitive, and socio-emotional competencies that are grounded in universal moral values and that enable individuals to face the challenges and harness the opportunities of digital life"* (Park, 2019, p. 4). Eight dimensions were measured: (1) digital citizen identity, which refers to the ability to figure out the benefits of online and offline identity with integrity, balance, and respect; (2) privacy management, referring to the ability to cope and protect all privacy data shared online by oneself and others; (3) critical thinking, which is the ability to differentiate content as facts, opinions, or criticism, harmful, honest and/or doubtful contacts, content and information online; (4) screen time management, referring to the ability to handle the screens through which they interact when engaged online; (5) cyber-bullying management, which refers to the ability to intelligently distinguish, avoid, and detect cyber threats and bullying; (6) digital footprints, the ability to comprehend the traceable digital activities or actions manifested in cyber space to consume wisely; (7) cybersecurity management, the ability to protect the data, as well as handling cyber-attacks by hackers, and criminals; and (8) digital empathy, which refers to the ability for cognitive compassion towards oneself and others empathetically online. However, the studies show that DQ predicts self-expressive, creativity, emotional attention, clarity, and repair, self-esteem, agreeableness, conscientiousness, neuroticism, and openness to experience (Pérez-Fuentes et al., 2019). Techataweewan and Prasertsin (2018) discovered that digital literacy of Thai undergraduate students must consist of four main

skills, namely, operation, thinking, collaboration and awareness skills, which lead to academic achievement and employment opportunities. The research showed that people with high DQ tend to be more concerned about the privacy risk than lower DQ people because disclosed personal information can be misused by social network sites (SNSs) (Liu et al., 2018; Krämer & Schäwel, 2020).

Generation Y and Z Characteristics in Collectivism

Social media usage behaviors are diverse across generations. Gen Ys or Millennials (1980 to 1994) were born into a period of technological transitions and changes. With new technological platforms, Gen Ys are comprehensively adapting to change and rapidly respond to technology, and are technically savvy, which leads to informality, a strong positive work attitude, multi-tasking skills, being tenacious, fast learning, valuing work-life balance, able to provide concrete feedback, valuing work challenges, being less motivated by money, and embrace corporate social responsibility (Frye et al, 2020). Gen Zs (1995 to 2012) have been completely shaped by cyber technology. They were born into fast-emerging social media and technology, whereas Gen Ys tend to be thoughtful, compassionate, open-minded, loyal, determined, with high discovery, exploration, risk-taking, fluid time and space, equality matters. On the other hand, Gen Zs are motivated by rewards, e-centric attitudes, fear of missing out, and sharing that can be revenue-generating, comfortable communicating and disclose information with others through instant messaging and sharing their ideas, attitude, political views, personal data online (Seemiller & Grace, 2016). The statistics showed that Gen Zs and Ys in collectivist countries both tend to use social media more than western individualism context, where Gen Zs are more likely to have higher self-disclosure in social media than other generations (Statista Research Department, 2021). The research revealed that differences in generations contribute to diversity in attitudes, values, lifestyles, preferences, interests, beliefs, including self-recognition, disclosure, and behavior (Frye et al, 2020).

The contexts of collectivism such as Latin America, Asia, and Africa have been predominantly influenced by the collectivist culture, which is embedded in group identity, engaged in social thought and comparison, values social reputation, avoids embarrassment, is face-saving, and needs to be accepted by the group (Kawamura, 2012). Collectivists are more likely to emphasize the group over the individual, closely connected to others, more thoughtful, sharing straightforward ideas or criticizing other ideas, especially with seniority, which is sometimes inappropriate. Collectivists value high power distance, strong uncertainty avoidance, long-term orientation, restraint, or self-control, are masculinity-based but include strict sexual norms, and overall freedom of speech is not a primary concern (Hofstede, 2011). The characteristics of collectivist countries especially in East Asia, such as China, Korea, Japan, Philippines, Thailand, Malaysia, Singapore, and Indonesia, are encouraged by group assembly, decisions made by the consensus of the group, working as a group being essential, and the goals of the groups are paramount. In Thailand, as a collectivist country, social connection, group norms, and team support are crucial to the work environment, with more thoughtfulness to the group, including important decisions which require consensus. According to Liang et al. (2017) collectivist countries are more effective in encouraging self-disclosure because the people want to connect with their friends and be engaged in a social context they belong.

Methodology

Participants and Measures

A quantitative method was used by randomly collecting 804 participants, 252 were Gen Y (1980–1994), and 552 were Gen Z (1995–2012), selected from around Thailand by using Kline (2005) ($N > 100$ rule) to estimate the sample size that suits the Multivariate Analysis Technique for Structural Equation Modelling (SEM) by Maximum Likelihood Estimation (Hair, 2009) from Free Statistics Calculation by Soper (2020) with A-priori Size calculation for SEM. Besides, the questionnaire was developed with standardized scales as follows;

Social influence scales were developed by using Cialdini and Goldstein (2004) with four components; persuasion, conformity, compliance, and obedience assessed with 6-point Likert scales. The scale showed an internal consistency of .83.

EQ was assessed by using Goleman (1998) and Bariso (2020), comprising of five dimensions; self-awareness, self-regulation, self-motivation, empathy, and social skill. The scales comprised positive and negative items with 6-point Likert scales. The scales showed a Cronbach's alpha of .76 after the pretesting.

Self-esteem was developed by integrating the versions of Coopersmith (1981), and Jueajinda and Phophi (2019) in 6-point Likert scales. The measurement consisted of seven dimensions of self-confidence, self-satisfaction,

self-respect, self-responsibility, self-assertiveness, social responsibility, and interrelationship. The Cronbach's alpha after the pretesting was .74.

DQ was adapted from Park (2019), consisting of eight dimensions, including digital citizen identity, privacy management, critical thinking, screen time management, cyber-bullying management, digital footprints, cybersecurity management, and digital empathy with 6-point Likert scales. The scales showed an internal consistency of .77.

Self-disclosure was adapted by integrating Devito (2000) into the two dimensions of self-disclosure breadth and depth of disclosure. The tryout showed Cronbach's alpha of .80

The content validity of the measurement was conducted by three specialists, a nurse, a psychologist, and a human resource specialist to find the Index of Congruence (IOC). Then the internal Consistency Reliability was tested for 30 non-sample tryouts, and was .77.

Data Collection

A cross-sectional quantitative method was conducted as the research design. A face-to-face questionnaire was given and returned after one week. Moreover, online structured questionnaires were implemented via Google form. The language used in the survey was simplified by three experts. Ambiguity and jargon were not reported during the completion. The participants were volunteers and fully informed participating as per the Declaration of Helsinki, and The Belmont Report. The protocol was approved by the Institution Ethical Board of the Pibulsongkram Rajabhat University Ethics Committee (PSRU-EC: 2021/042, COA NO: 050/2021).

Data Analysis

The data were analyzed by using a statistical software package of linear structural relations in descriptive statistics, inferential statistics, namely, the Confirmatory Factor Analysis (CFA), Correlation, Structural Equation Modelling (SEM), and Invariance Analysis. Furthermore, the fit indices which are Chi-squared, *df*, *p* value, x^2/df, AGFI, SRMR, GFI, AGFI, and RMSEA were used to test SEM.

Results

1. Demographic data showed most of the sample were female (n = 461, 57.3%), male (n = 252, 31.2%) and others (n = 91, 11.3%). Mostly, Gen Ys and Zs were single (n = 496, 89.9%) (n = 87, 34.5%), however, some Gen Ys were married (n = 101, 40%). Most of the Gen Z samples held undergraduate degree (n = 451, 81.7%), while most of Gen Ys' held postgraduate degree (n = 132, 52.4%). Most of Gen Zs had a family income less than 20,000 BHT/month (n = 332, 60.1%), while Gen Ys had 70,000–90,000 BHT/month (n = 80, 31.7%). Both Gen Zs and Gen Ys lived in a rural area (Gen Zs n = 362, 65.6%; Gen Ys n = 128, 50.8%) and urban area (Gen Z n = 189, 34.2%; Gen Y n = 124, 49.2%) as shown in table 1.

2. Confirmatory Factor Analysis testing indicated that all variable scales provided a good fit, as shown in Table 2. The bivariate correlation analysis showed the three highest correlation values, namely, self-esteem, showing a positive relationship to emotional intelligence (r =.79), digital intelligence (r = .78), and self-disclosure and social influence (r = .60) at the significant level .05, as seen in Table 3. Moreover, the linear regression model assumes that error terms are independent (Durbin-Watson was range 1.5−2.5), and Multicollinearity was not found (VIF's value less than 10, Tolerance > .5).

3. Structural equation model of generation Y and Z self-disclosure

The maximum Likelihood after adjusting the model validity by using the correlation error method of Gen Y self-disclosure SEM reveals Chi-square = 1136.22, df = 290, p = .00, x^2/df = 3.90, GFI = .90, AGFI = .88, RMSEA = .06 and SRMR = .06 thus the model had an acceptable fit (Hair, 2009). Gen Z self-disclosure model also provides an acceptable fit at Chi-square = 2443.89, df = 290, p = .00, x^2/df = 8.42, GFI = .81, AGFI = .77, RMSEA = .09 and SRMR = .06.

However, Table 4 and 5 showed Gen Y and Z with latent variable that EQ positively affects self-esteem the most, and DQ and social influence negatively affect self-esteem. Gen Z self-esteem was influenced by EQ the most, then positive effect to DQ and social influence. Figures 1 demonstrates the Gen Y and Z self-disclosure SEM.

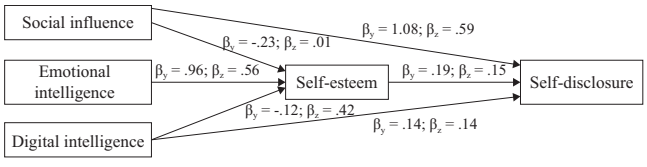

Figure 1 Self-disclosure generation Y and Z

Table 1 Demographic data

Demographic data	Gen Z (n = 552)		Gen Y (n = 252)		Total (n = 804)	
	n	Percent	n	Percent	n	Percent
1. Gender						
Male	161	29.2	91	36.1	252	31.3
Female	377	68.3	84	33.3	461	57.3
Others	14	2.5	77	30.6	91	11.3
2. Status						
Single	496	89.9	87	34.5	583	72.5
Married	39	7.1	101	40.1	140	17.4
Others	13	2.4	64	25.4	77	9.6
3. Educational background						
High School	43	7.8	4	1.6	47	5.8
Vocational Education	51	9.2	3	1.2	54	6.7
Undergraduate	451	81.7	113	44.8	564	70.1
Postgraduate	7	1.3	132	52.4	139	17.3
4. Family income						
Less than 20,000 BHT/month	332	60.1	3	1.2	335	41.7
20,001–50,000 BHT/month	154	27.9	12	4.8	166	20.6
50,001–70,000 BHT/month	36	6.5	78	31.0	114	14.2
70,001–90,000 BHT/month	12	2.2	80	31.7	92	11.4
90,001–110,000 BHT/month	10	1.8	76	30.2	86	10.7
Above 110,000 BHT/month	8	1.4	3	1.2	11	1.4
5. Area						
Urban area	189	34.2	124	49.2	313	38.9
Suburb and rural area	362	65.6	128	50.8	490	60.9

Table 2 Single level CFA measurement model fit

Measurement Model Fit	Criteria (Kaplan, 2000)	Social influence	Emotional intelligence	Self-esteem	Digital intelligence	Self-disclosure
Chi-square (χ^2)		252.88	1599.90	3515.85	2582.13	1957.95
Degree of freedom		50	270	587	657	150
p value	> .05	.00	.00	.00	.00	.00
χ^2/df	2.00–5.00	5.05	5.92	5.98	3.93	3.93
GFI	.90–.95	.95	.86	.86	.85	.79
AGFI	.90–.95	.92	.83	.83	.83	.74
SRMR	< .05	.04	.06	.06	.05	.08
RMSEA	.05–.08	.07	.07	.07	.04	.1

Table 3 The correlation matrix

Variables		1	2	3	4	5
1. Social influence		1	0.52*	0.27*	0.15*	0.60*
2. Emotional intelligence			1	0.78*	0.66*	0.52*
3. Self-esteem				1	0.79*	0.43*
4. Digital intelligence					1	0.35*
5. Self-disclosure						1
Gen Z	M	3.60	4.32	4.51	4.64	4.07
	SD	0.97	0.67	0.73	0.78	0.95
Gen Y	M	4.46	4.49	4.52	4.53	4.39
	SD	0.50	0.23	0.24	0.31	0.45

Note: *p = .05, two-tailed.

Table 4 Generation Y and Z self-disclosure with latent variable

Latent variable			β		SE		*p*	
			Gen Y	Gen Z	Gen Y	Gen Z	Gen Y	Gen Z
Social influence	→	Self-esteem	-.23	.01	0.10	0.02	-2.29	.70
Emotional intelligence	→	Self-esteem	.96	.56	0.20	0.03	4.65	14.70
Digital intelligence	→	Self-esteem	-.12	.42	0.20	0.03	-0.62	12.29
Social influence	→	Self-disclosure	1.08	.59	0.10	0.03	10.00	15.84
Self-esteem	→	Self-disclosure	.19	.15	0.09	0.06	2.12	2.21
Digital intelligence	→	Self-disclosure	.14	.14	0.10	0.06	1.43	2.11

Table 5 The path coefficient of generation Y and Z self-disclosure SEM

Variables	TE				IE				DE			
	SD		SE		SD		SE		SD		SE	
	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z
SI	1.03	0.59	-0.23	0.01	-0.04	0.002	-	-	1.08	0.59	-0.23	0.01
EQ	0.18	0.08	0.96	0.56	0.18	0.08	-	-	-	-	0.96	0.56
DQ	0.12	0.20	-0.12	0.42	-0.02	0.06	-	-	0.14	0.14	-0.12	0.42
SE	0.19	0.15	-	-	-	-	-	-	0.19	0.15	-	-

Note: SI = Social influence, EQ = Emotional intelligence, DQ = Digital intelligence, SE = Self-esteem, SD = Self-disclosure, Y = Generation Y, Z = Generation Z, TE = Total effect, IE = Indirect effect, DE = Direct effect.

Figure 1 refers to the Self-disclosure of generation Y and Z. The path coefficient in Table 5 refers to the path coefficient that shows that self-disclosure of Gen Y is totally affected by social influence (β = 1.03, p = .05), EQ (β = .18, p = .05), and DQ (β = .12, p = .05), and self-esteem (β = .19, p = .05), while social influence and DQ have a negative effect on self-esteem. Gen Z self-disclosure was impacted by social influence the most (β = .59, p = .05), EQ (β = .56, p = .05) then self-esteem (β = .15, p = .05) and DQ (β = .20, p = .05).

4. The results of Invariance analysis of generation Z and Y by using the independence model, unconstrained, measurement weights, structural weights, structural covariance, and measurement residuals as in Table 6 revealed that the model of social influence, EQ, DQ, and self-esteem affecting self-disclosure indicated variance of parameters in the matrix of causal effects between the endogenous latent variables and parameters in the matrix of causal effects of the latent exogenous variable to endogenous latent variable and variance-covariance of the latent exogenous variable and variance-covariance of error across generations (Table 7).

Discussion

The results revealed that self-disclosure of Gen Z and Y was influenced by social influence, DQ, and that self-esteem by EQ is a positive influence. This indicates that social influence directly influences Gen Z to disclose themselves to social media. According to social learning theory, people interact simultaneously with the environment and their social environment, which models individuals to behave and continuously adjust their attitudes, beliefs, and values to fit with that particular community. Especially in online social media, people perceived themselves as belonging to the cyber community that is relevant to their preferences and styles,

Table 6 The variability of the causal factor model

Model	χ^2	*df*	χ^2/df	GFI	AGFI	CFI	RMSEA	RMR
Independence model	13484.85	650	20.74	.18	.11	.00	.15	.29
Unconstrained	2668.43	590	4.52	.79	.75	.83	.06	.16
Measurement weights	2705.93	611	4.42	.78	.75	.83	.06	.16
Structural weights	2726.78	617	4.41	.78	.75	.83	.06	.16
Structural covariance	3341.08	620	5.38	.75	.72	.78	.07	.23
Measurement residuals	3561.44	646	5.51	.73	.71	.77	.07	.23

Table 7 Invariance analysis model of generation Y and Z

Model	DF	CMIN	*p*	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Assuming model Unconstrained to be correct							
Measurement weights	21	37.49	.01*	.00	.00	-.00	-.00
Structural weights	27	58.35	.00*	.00	.00	-.00	-.00
Structural covariance	30	672.64	.00*	.05	.05	.04	.04
Measurement residuals	56	893.00	.00*	.06	.06	.04	.05
Assuming model Measurement weights to be correct							
Structural weights	6	20.85	.00*	.00	.00	.00	.00
Structural covariance	9	635.14	.00*	.04	.04	.04	.04
Measurement residuals	35	855.50	.00*	.06	.06	.05	.05
Assuming model Structural weights to be correct							
Structural covariance	3	614.29	.00*	.04	.04	.04	.04
Measurement residuals	29	834.65	.00*	.06	.06	.05	.05
Assuming model Structural covariance to be correct							
Measurement residuals	26	220.35	.00*	.01	.01	.00	.00

Note: * $p < .05$, two-tailed.

so online influencers might persuade and convince users to comply with such community preferences and styles to disclose or share personal information in order to gain trust. According to the result, DQ predicts self-esteem in Gen Z, a significant consequence of progress, while technology manifests and synchronizes Gen Z to social media unintentionally. Thus, the more digital literacy endorsement, the more self-esteem, and logical reasoning are enhanced and accomplished to avoid cyber-bullying, utilizing social media in positive approaches. When a person discloses their attitudes, styles, and/or values, their relationship with their community and sense of belonging will be advanced, which contributes to the future involvement and social status. In addition, in complying with the social network group standards, self-disclosure will play according to the norms of the group, where people are induced to share, post, comment, and disclose data in order to increase the group's engagement and connect and align with the reference group's values (Dwyer et al., 2007). On the other hand, social influence and digital literacy had negative effects on the self-esteem of Gen Y because Gen Ys are highly confident, value work-life balance and are independent social influences couldn't affect Gen Y's self-esteem as much as DQ, because DQ will make them feel uncomfortable using social media. They will always be thoughtful when posting and commenting to others, and use social media more carefully. However, the results also indicated that EQ is a critical factor affecting the self-esteem of both Generations. EQ contributes to self-awareness, empathy, and constructive relationship as well as self-esteem in terms of a positive self-feeling, which leads to psychological capital. An EQ person realizes and transfers positive feelings to others.

Nevertheless, SEM models show variances across generations. Gen Ys valued work-life balance and grew up with the technological transitions period, which affects Gen Ys self-disclosure. Social penetration theory (SPT) can be practically applied to the findings where both generations attached to self-disclosure differently according to the exogenous psychological variables, especially social influences. Gen Z members were born in a technological environment, on-demand entertainment, constant connectivity, and social media with high-bandwidth cellular and virtual reality, thus dramatically shifting Gen Z behaviors, lifestyles, attitudes, values, mindsets, leadership, and disclosure styles. Moreover, the difference in parenting styles, social environment, socioeconomic status, and culture differentiate Gen Z from other generations of psychological recognition and perception towards cyber technology (Dimock, 2019). These observations are consistent with Bresman and Rao (2017), who found the difference between Gen Y and Z across countries in terms of the talent pipeline, leadership experiences, ambition, expectations, efficacy, and digital literacy. In addition, in the context of Generation Y and Z in collectivism, society influences social media online self-disclosure because of the demand to be psychological fulfilled and supported as well as being accepted by the group, so social connection, group activities, and team support are critical and embedded (Kawamura, 2012).

As Gen Ys have become mature, they tend to be more enthusiastic in coaching and mentoring, which comes from management styles rather than from having higher responsibility, value work-life balance, and grew up in the technological transition period. Such has affected Gen Ys self-disclosure as well as preferred high responsibility and job autonomy as attractive aspects of leadership. In other words, Gen Y viewed technology most favorably, while Gen Z perceived technology as useful (Persada et al., 2019). Parents, organizations, and leaders might understand an EQ, self-efficacy including promoting DQ, and group cohesion among generation cohorts to strengthen positive self-disclosure and not fall victim to cybercriminals.

Conclusion and Recommendation

The research revealed the variances across generations, social influences, and emotional and digital intelligence contribute to self-esteem and self-disclosure on social media of Gen Ys and Zs in a developing collectivism country where social engagement is predominant. This study advances and extends the social penetration theory of self-disclosure in dimensions of applied EQ, DQ and self-esteem. The recommendations of applying this study are to promote emotional and digital intelligence in order to increase the self-esteem of Gen Ys and Zs, which somewhat leads to how this generation interacts with the cyber world in a positive way. However, like any other research, this study has some limitations. First, data were collected by questionnaire, thus qualitative research is required to further examine the research results to confirm the results. Second, as this research was conducted in a country that is representative of a collectivist country, future studies are necessary to extend these results to other collectivist countries and to include the individualism context to authenticate the findings. Finally, future research might develop additional variables, such as psychological capital, perceived social support, and/or parenting styles, to the model to advance the concept of self-disclosure.

Conflict of Interest

The author declares that there is no conflict of interest.

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