



Investigating the Interplay of Coping Mechanisms and Socio-Cultural Influences in repetitive behavior: A pilot study

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ABSTRACT

The objectives include evaluating the fit of the proposed model, assessing the reliability of the utilized scale, and investigating potential biases within the dataset. The default model demonstrates moderate fit, with a chi-square statistic (CMIN) of 2954.241 with 900 degrees of freedom and a CMIN/DF ratio of 3.282. The Root Mean Square Residual (RMR) of 0.257 indicates a moderate discrepancy between the model and observed data. The Goodness-of-Fit Index (GFI) is 0.686, suggesting relatively poor fit. Reliability analysis of the scale indicates satisfactory internal consistency, with Cronbach's alpha coefficients of 0.756 and 0.752 for raw and standardized items, respectively. Analysis of the dataset reveals varied responses across psychological constructs, including Rumination, Discounting, Distraction, Observational Learning, Societal Expectation, Peer Pressure, and Peer Influence. The findings suggest that while the default model provides a moderately adequate representation of the relationships between variables.

Keywords: Coping mechanisms, Socio-cultural influences, Repetitive behavior, psychological coping, Cultural psychology, Coping strategies, Behavioral patterns, Societal norms, Cross-cultural analysis

INTRODUCTION

While perseverance doesn't have a universally recognized theory or model, it is often examined within broader psychological and motivational theories. Scholars and psychologists have examined the variables that impact perseverance and have put forth models that include components associated with persistence, resilience, and consistent effort. These are a few models and ideas that address various facets of persistence. Self-Determination Theory (SDT) developed by Deci and Ryan, focuses on the motivation behind human behavior (Ryan & Deci, 2000). Goal setting theory (GST), developed by Locke and Latham, emphasizes the importance of setting clear and challenging goals to enhance motivation and performance (Locke & Latham, 2002). Bandura's Social Cognitive Theory (SCT) includes the concept of self-regulation, where individuals manage their thoughts, behaviours, and emotions to achieve goals. The Conceptual Model of the study is developed based on the Cognitive emotion regulation, cognitive appraisal, coping strategies (Anshel et al., 2012) (Garnefski & Kraaij, 2007), Bandura's Social Cognitive Theory (Bandura & Walters, 1977)(Bandura, 1991), which includes factors such as observational learning, reinforcement, and imitation as key components. Gerhards and Christina Gravert manuscript concluded that peer effects could create long-term changes in perseverance that potentially carry over to individual work tasks (Gerhards & Gravert, 2020). Therefore, we included factors such as peer pressure and peer influence. We did include cultural norm and societal expectation as a cultural and social factor from social identity theory. The theory emphasizes how individuals derive a sense of identity from their group memberships. Cultural norms and societal expectations may influence perseverance through the lens of social identity, as individuals may persist in behaviors that align with their cultural group norms (Tajfel, 1982; Khan, et al., 2019).

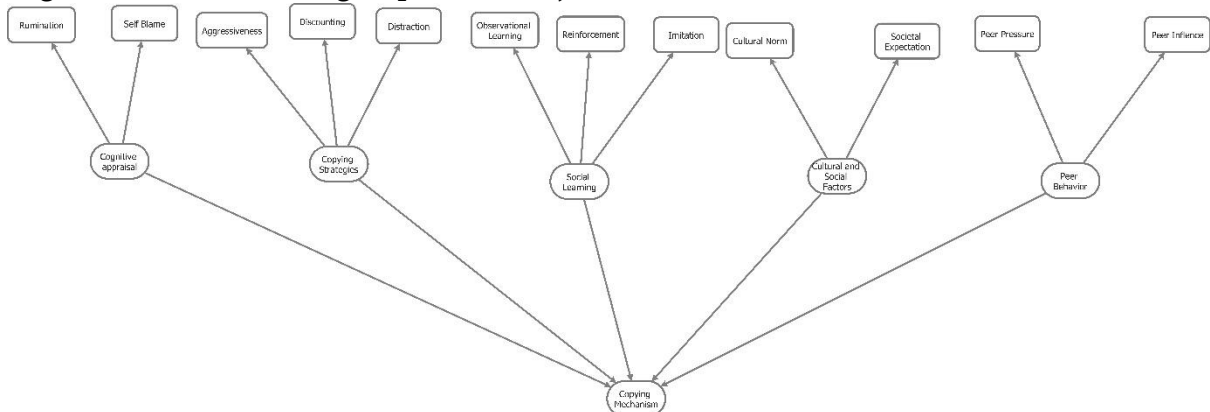


Figure 1: Original Model of Perseverance

METHODOLOGY

Study design

The research applied a quantitative approach to investigate the relationship between exogenous and endogenous variables based on its nature and philosophy. Due to time and financial constraints, a cross-sectional design was adopted. It is important to note that the cross-sectional approach was deemed appropriate because of the academic nature of the present study. Convenience sampling is a non-probabilistic sampling technique often used in research due to its practicality. This method involves selecting participants based on their easy availability or accessibility to the researcher. However, convenience sampling can introduce bias into the sample, as individuals who volunteer or are easily accessible may not represent the entire population accurately. Despite its drawbacks, convenience sampling remains valuable in certain contexts, such as pilot studies, qualitative research, or when studying specific subgroups within a population.

Sample size determination

According to recent analysis by Gallup Pakistan of the 7th Population & Housing Census 2023, Pakistan's population has reached 241.5 million, marking a significant increase of 33.82 million since the 2017 census. Punjab experienced the highest population increase, followed by Sindh, Khyber Pakhtunkhwa, Balochistan, and Islamabad Capital Territory. Balochistan had the highest average population growth rate, while Khyber Pakhtunkhwa and Punjab had the lowest. Despite slight changes in provincial proportions, the population of each province remained relatively stable. Population growth rates varied across regions and districts, with Lahore district in Punjab and Lower Kohistan district in KPK experiencing the highest increases (Pakistan, 2023). We determined the required sample size for our study using an online sample size calculator available at calculator.net. The calculator allowed us to input parameters such as the desired confidence level, margin of error, and population proportion to calculate the optimal sample size. We utilized a confidence level of 95%, a margin of error of 5%, and assumed a population proportion of 50% due to initial uncertainty. This resulted in a calculated sample size of 385. Subsequently, we aimed to collect data from a sample of this size to ensure adequate statistical power and precision in our study. This sample size ensures that our study possesses adequate statistical power to detect meaningful effects and produce reliable results. Although our initial sample size calculation indicated a requirement of 385 responses, we ultimately collected 354 responses for our study. This slight deviation from the calculated sample size may be attributed to various practical constraints encountered during data collection, such as time limitations, resource availability, or participant recruitment challenges.

Instrument Design

The instrument represents the questionnaire items used to measure each construct within the study's model (Sekaran & Bougie, 2016). The questionnaire's items adapted from previously published studies. The scale of measurement was a five-point likert scale for all factors, ranging from 1 to 5 (5 strongly disagree to 1 strongly agree) (1 very likely to 5 very unlikely) (1 always to 5 never).

Construct measurement

The survey measured twelve main variables: RUM, SB, A, DISCO, DIS, OL, RE, I, CN, SE, PP and PI. All variables adapted from previous studies with some changes in

wording made on these items. Table 1 summarises variables and the total number of items used to measure each of the variables.

Table 1: Codes, Descriptions, and Measurement of Variables

Constructs	Definition	Codes	Items	Reference
Rumination (RUM)	RUM is associated with less authentic, more repetitive, negative, and difficult-to-follow disclosure when shared with others, impacting interpersonal relationships and social support mechanisms negatively.	RUM1	I often find myself replaying the same thoughts in my mind without finding a resolution.	(Anshel et al., 2012)(Domaradzka & Fajkowska, 2018)
		RUM2	I have difficulty shifting my focus away from repetitive thoughts about past events or worries.	
		RUM3	Repetitive thinking keeps me stuck in unproductive thought loops.	
		RUM4	I tend to overanalyze situations, thinking about them repeatedly.	
Self-blame (SB)	SB characteristics involves in repeated patterns of behavior.	SB1	When I engage in repetitive behaviors, I tend to blame myself for not being able to stop them.	(Garnefski & Kraaij, 2007)(Anshel et al., 2012)

		SB2	I often feel foolish or inadequate when I find myself stuck in repetitive thought patterns.	
		SB3	Repetitive behaviors make me doubt my ability to handle situations effectively.	
Aggressiveness (A)	Aggressiveness is goal-oriented, motivated by the desire to obtain a desired outcome, and occurs in the absence of provocation and emotional arousal.	A1	I argued with the person responsible for the problem.	(Anshel et al., 2012)
		A2	I showed aggressive actions of frustration or anger.	
		A3	I thought about revenge ; striking back.	
			I used profanity (cussing aloud).	
Discounting (DISCO)	DISCO leads to increase in repetitive behavior.	DISCO1	I ignored or forgot about the problem.	(Anshel et al., 2012)
		DISCO2	I thought something that took mind off the problem.	

		DISCO3	I told my self that it's nothing serious.	
Distraction (DIS)	DIS leads to increase in repetitive behavior.	DIS1	I thought about something to distract me so I wouldn't think about it.	(Anshel et al., 2012)
		DIS2	I did something else to occupy time.	
Observational Learning (OL)	OL can increase repetitive behavior in individuals. This is because when people observe others performing a behavior repeatedly, they are more likely to imitate that behavior themselves	OL1	I often learn new behaviors by observing how others do them	(Bandura & Walters, 1977)
		OL2	When I see someone, I admire engaging in a particular behavior, I am more likely to try it myself.	
		OL3	I pay close attention to how people around me behave in certain situations	
		OL4	I believe that observing others helps me understand how to do things	

Reinforcement (RE)	RE can increase repetitive behavior through the concept of operant conditioning.	RE1	When I engage in a behavior and receive positive feedback or rewards, I am more likely to repeat that behavior.	(Bandura & Walters, 1977)
		RE2	Negative consequences or criticism from others discourage me from repeating certain behaviors.	
		RE3	Receiving praise or recognition from others motivates me to continue specific actions.	
		RE4	I tend to avoid behaviors that have led to negative outcomes in the past	
Imitation (I)	Imitation leads to increase in repetitive behavior.	I1	I often find myself imitating the behaviors or habits of people I admire.	(Bandura & Walters, 1977)
		I2	If someone I respect starts a new hobby, I'm inclined to try it too	

		I3	I tend to copy the way others speak or act when I want to fit in with a group.	
		I4	I believe that imitating successful people is a good way to achieve success myself.	
Cultural norms (CN)	CN to increase in repetitive behavior in a general population.	CN1	In my culture, there is a strong emphasis on specific rituals or routines that should be followed.	(Liu et al., 2022)
		CN2	Cultural traditions play a significant role in how I approach daily tasks and routines.	
		CN3	People from my cultural background are expected to maintain a high level of orderliness in their lives.	
		CN4	Cultural beliefs influence the way I organize my belongings and routines.	
Societal expectation (SE)	SE to increase in repetitive behavior in a general population.	SE1	Society places a lot of pressure on individuals to conform to	(Anderson et al., 1980)

			certain standards of cleanliness and organization.	
			There is an expectation in society that people should always strive for perfection in their actions and appearance.	
			Society often judges individuals who deviate from established norms and routines.	
			Society influences how I feel about my own behaviors and habits.	
Peer pressure (PP)	PP to increase in repetitive behavior in a general population.		I sometimes engage in repetitive behaviors because I feel pressure from my peers to do so.	(Gerhards & Gravert, 2020)
			My friends or social group often encourage specific routines or habits that I wouldn't otherwise engage in.	

			I've found myself imitating certain behaviors because I want to fit in with my peer group.	
			Peer pressure plays a role in how I approach cleanliness and organization in my life.	
Peer Influence (PI)	PI increases in repetitive behavior in a general population.		My friends or peers often engage in repetitive behaviors, which makes me more likely to do the same.	(Gerhards & Gravert, 2020)
			I've felt pressure from my peers to adopt certain habits or routines in my life.	
			Peer influence has led me to imitate behaviors that I wouldn't have considered on my own.	
			The behavior of my friends significantly impacts my own choices, including repetitive	

			behaviors.	
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Statistical analysis:

Statistical analysis was conducted to assess the fit of the proposed model to the observed data and to evaluate the reliability of the measurement scale utilized in the study. Descriptive statistics, including means, standard deviations, skewness, and kurtosis, were computed for each variable, providing insights into the distributional characteristics of the data. Chi-square statistics, Root Mean Square Residual (RMR), and Goodness-of-Fit Index (GFI) were employed to evaluate the fit of the model, with additional consideration given to baseline comparison indices such as Normed Fit Index (NFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI). Reliability analysis of the scale involved calculating Cronbach's alpha coefficients and examining item-total correlations to assess internal consistency. Principal component analysis was utilized to explore potential biases within the dataset, with communalities and factor loadings analyzed to ascertain the underlying factors influencing respondents' perceptions. Statistical significance was determined using appropriate tests, including ANOVA and Hotelling's T-squared test, to identify significant differences between variables and individuals. Intraclass correlation coefficients were computed to assess consistency within and between individuals, providing insights into individual differences in scale interpretation. The statistical analysis aimed to provide a comprehensive understanding of the data, ensuring the reliability and validity of the study findings.

RESULTS AND DISCUSSION

The default model, as indicated by its chi-square statistic (CMIN) of 2954.241 with 900 degrees of freedom, suggests moderate fit with a CMIN/DF ratio of 3.282. The Root Mean Square Residual (RMR) of 0.257 indicates a moderate discrepancy between the model and observed data. The Goodness-of-Fit Index (GFI) is 0.686, suggesting relatively poor fit. Baseline comparison indices such as Normed Fit Index (NFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI) hover around 0.5 to 0.6, indicating suboptimal fit. The Parsimony Ratio (PRATIO) of 0.997 suggests a reasonable balance between model complexity and fit. Other fit indices like non-centrality parameter (NCP), Minimum Function Chi-Square (FMIN), Root Mean Square Error of Approximation (RMSEA), Akaike Information Criterion (AIC), and Expected Cross-Validation Index (ECVI) also suggest suboptimal fit.

Evaluation of fit indices for the refined model revealed notable improvements compared to the original model. The chi-square statistic (CMIN) decreased to 443.32 with 129 degrees of freedom, resulting in a CMIN/DF ratio of 3.437, indicating moderate fit. Root Mean Square Residual (RMR) decreased to 0.241, suggesting a moderate discrepancy between the model and observed data. The Goodness-of-Fit Index (GFI) increased to 0.894, indicating relatively good fit. Baseline comparison indices, such as Normed Fit Index (NFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI), improved to around 0.7 to 0.8, indicating better fit. These improvements suggest that the refined model provides a more accurate representation of the relationships between variables. Table 2 depict the Fit statistics of the hypothesized

models.

Table 2: Fit statistics of the hypothesized models

Questionnaire	Model	X ²	X ² /df	df	NFI	CFI	PNFI	RM R	RMSEA	Model AIC
Perseverance	Original Model	2954.241	3.282	900	0.487	0.577	0.486	0.257	0.08	3046.241
	Modified Model	443.32	3.437	129	0.742	0.802	0.704	0.241	0.083	3046.241

X² chi-square, df degrees of freedom, NFI normed fit index, CFI comparative fit index, PNFI parsimony normed fit index, RMR root mean square residual, RMSEA root mean square error of approximation, Model AIC Akaike's information criterion *p < .005

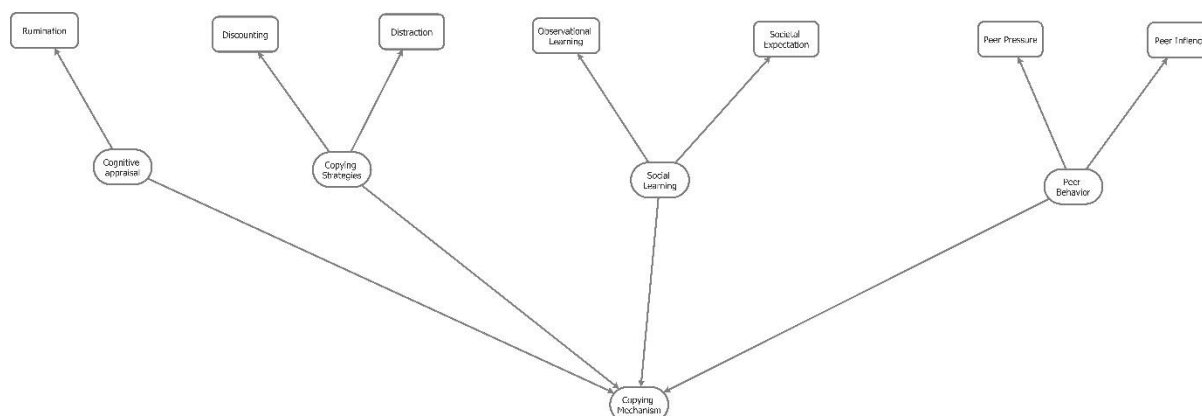


Figure 2: Modified Model of Perseverance

The reliability analysis of the scale utilized in this research yielded satisfactory internal consistency, with Cronbach's alpha coefficients of 0.756 and 0.752 for raw and standardized items, respectively, indicating moderate reliability. Comprising 17 items, the scale exhibited variability in responses, with mean scores ranging from 1.92 to 3.04 and standard deviations from 0.778 to 1.051. Inter-item correlation matrix revealed predominantly positive correlations among items, albeit some weaker associations, suggesting diverse aspects of the construct. Item-total statistics indicated positive contributions of all items to scale reliability, with corrected item-total correlations ranging from 0.204 to 0.515 and Cronbach's alpha coefficients if items were deleted from 0.729 to 0.757. Overall scale statistics showed a mean of 41.39 and variance of 58.726. ANOVA results indicated significant differences between individuals and items, as well as no additivity within items, implying complex interactions. Hotelling's T-squared test confirmed significant variability in item responses among individuals. Intraclass correlation coefficients suggested moderate consistency within and between individuals, highlighting individual differences in scale interpretation. These findings collectively affirm the scale's moderate reliability and underscore the necessity of accounting for

individual variability in research interpretation and application. Table 3 represent the Inter-item and item-total correlation of Model.

Table 3: Psychometric characteristics of the Model

	Factors	Description	Corrected Item-total correlation	Squared Multiple correlation	Cronbach's alpha if item deleted	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1	RUM_1
RUM_1	Rumination	Replaying thoughts without resolution	.246	.209	.752	1.000	.416	-.083	-.013	.051	.091	.063	.104	.122	.141	.088	.132	.183	.128	.130	.109	.170
RUM_3	Rumination	Stuck in unproductive thought loops	.306	.243	.748	.416	1.000	-.041	.026	.095	.135	.000	.151	.149	.204	.106	.181	.228	.179	.185	.133	.150
DISCO_1	Discounting	Ignored or forgot about the problem	.204	.232	.757	-.083	-.041	1.000	.310	.378	.264	.213	.115	-.059	.031	-.017	.106	.017	.037	.019	.101	.068
DISCO_2	Discounting	Thought to distract from the problem	.216	.287	.755	-.013	.026	.310	1.000	.348	.428	.366	.190	.017	.034	.116	-.047	-.022	.024	-.049	-.071	-.060
DISCO_3	Discounting	Minimized seriousness of the problem	.297	.324	.749	.051	.095	.378	.348	1.000	.461	.348	.212	.033	.130	.051	.037	.012	.016	.037	-.011	-.001
DIS_1	Distraction	Thought of something to avoid thinking about it	.373	.468	.742	.091	.135	.264	.428	.461	1.000	.578	.172	.126	.140	.170	.077	.018	.048	.056	-.030	.011
DIS_2	Distraction	Engaged in other activities to occupy time	.229	.407	.754	.063	.000	.213	.366	.348	.578	1.000	.218	.110	.021	.139	.006	-.099	-.085	.001	-.080	-.074
OL_1	Observational Learning	Learned new behaviors	.309	.207	.748	.104	.151	.115	.190	.212	.172	.218	1.000	.343	.086	.156	.138	.099	.092	.081	.074	.048

		by observing others																				
OL_3	Observational Learning	Paying attention to how others behave	.241	.223	.753	.122	.149	-.059	.017	.033	.126	.110	.343	1.000	.178	.306	.081	.160	.036	.081	.066	.067
SE_2	Societal Expectation	Expectation to strive for perfection	.254	.280	.751	.141	.204	.031	.034	.130	.140	.021	.086	.178	1.000	.479	.072	.111	.128	.084	.040	.047
SE_3	Societal Expectation	Judged for deviating from norms and routines	.248	.312	.752	.088	.106	-.017	.116	.051	.170	.139	.156	.306	.479	1.000	.066	.122	.074	.065	-.024	.008
PP_3	Peer Pressure	Imitated behaviors to fit in with peer group	.489	.438	.730	.132	.181	.106	-.047	.037	.077	.006	.138	.081	.072	.066	1.000	.500	.494	.532	.545	.453
PP_4	Peer Pressure	Peer pressure affecting cleanliness and organization	.461	.427	.734	.183	.228	.017	-.022	.012	.018	-.099	.099	.160	.111	.122	.500	1.000	.540	.529	.427	.389
PI_1	Peer Influence	Friends' repetitive behaviors influence own behavior	.484	.491	.733	.128	.179	.037	.024	.016	.048	-.085	.092	.036	.128	.074	.494	.540	1.000	.603	.505	.497
PI_2	Peer Influence	Felt pressured by peers to adopt habits	.515	.558	.729	.130	.185	.019	-.049	.037	.056	.001	.081	.081	.084	.065	.532	.529	.603	1.000	.622	.542
PI_3	Peer Influence	Peer influence leading to	.441	.536	.736	.109	.133	.101	-.071	-.011	-.030	-.080	.074	.066	.040	-.024	.545	.427	.505	.622	1.000	.600

		imitation of behaviors																				
PI_4	Peer Influence	Friends' behavior significantly impacting own choices	.421	.442	.738	.170	.150	.068	-.060	-.001	.011	-.074	.048	.067	.047	.008	.453	.389	.497	.542	.600	1.000

The investigation employed questions related to perceptions of the colour blue to assess potential biases within the dataset. Principal component analysis reveals that the first component accounts for a substantial proportion (71.727%) of the total variance in the data, suggesting a dominant underlying factor influencing respondents' perceptions. Communalities represent the proportion of variance in each question that is accounted for by the underlying factor. Post-extraction, communalities range from approximately 0.588 to 0.749, indicating that the latent factor explains a considerable amount of the variance in respondents' ratings. The use of self-report measures may introduce biases related to social desirability or response consistency. Participants' responses may be influenced by factors not captured by the study design, such as individual differences or situational contexts. While the communalities indicate that the latent factor explains a considerable amount of the variance in respondents' ratings, further validation of the findings through complementary methodologies or replication studies is necessary to confirm the robustness of the results and ensure their validity across different contexts as presented in table 4.

Table 4: Factor Loadings of participants of Attitude Toward Blue Scale Items.

Components	Mean	S.D	Extraction Method: Principal Component Analysis.					Extraction Method: Principal Axis Factoring.	
			Communalities	Total	% of Variance	Cumulative %	Component Matrix	Communalities	Factor Matrix
Q1 Blue is a beautiful color	2.01	1.067	.721	5.021	71.727	71.727	.849	.675	.821
Q2 Blue is a lovely color	2.17	1.098	.729	.479	6.845	78.572	.854	.685	.828
Q3 Blue is a pleasant color	2.02	1.079	.730	.351	5.017	83.589	.855	.686	.828
Q4 The color blue is wonderful	2.09	1.068	.749	.329	4.704	88.293	.866	.712	.844
Q5 Blue is a nice	1.93	.980	.652	.296	4.222	92.514	.807	.588	.767

color									
Q6 I think blue is a pretty color	2.10	1.092	.717	.280	3.998	96.512	.847	.670	.818
Q7. I like blue	2.02	1.062	.723	.244	3.488	100.000	.850	.677	.823

The dataset encompasses various psychological constructs and demographic variables assessed among 354 participants. Analysis of the Rumination (RUM) items reveals a range of responses, with mean scores ranging from 1.92 to 2.49. Participants tended to agree or strongly agree with statements related to rumination, such as "I often find myself replaying the same thoughts in my mind without finding a resolution" (RUM_1) and "Repetitive thinking keeps me stuck in unproductive thought loops" (RUM_3). Similarly, Discounting (DISCO) items, which assess the tendency to ignore or downplay problems, exhibited mean scores ranging from 2.42 to 3.04. Notably, in the Discounting item DISCO_1 ("I ignored or forgot about the problem"), participants displayed varied responses, with significant proportions reporting "Neither agree nor disagree" and "Disagree." Distraction (DIS) items, focusing on diverting attention from distressing thoughts, yielded mean scores between 2.18 and 2.22. Observational Learning (OL) items, capturing tendencies to learn from observing others, showed mean scores ranging from 2.07 to 2.39. Societal Expectation (SE) items, measuring perceptions of societal norms and pressures, displayed mean scores between 1.93 and 2.05. Peer Pressure (PP) items, assessing the influence of peer behavior, yielded mean scores of 2.72 to 2.91. Lastly, Peer Influence (PI) items, gauging the impact of peer behavior on personal choices, showed mean scores between 2.61 and 2.82 (Table 5).

Table 5: Descriptive statistics

	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
RUM_1	354	4	1	5	680	1.92	.041	.778	.606	.900	.130	1.146	.259
RUM_3	354	4	1	5	758	2.14	.049	.926	.858	.769	.130	.153	.259
DISCO_1	354	4	1	5	1076	3.04	.056	1.050	1.103	-.035	.130	-.657	.259
DISCO_2	354	4	1	5	857	2.42	.050	.931	.868	.592	.130	-.034	.259
DISCO_3	354	4	1	5	881	2.49	.056	1.049	1.100	.711	.130	-.187	.259
DIS_1	354	4	1	5	785	2.22	.053	.999	.998	.822	.130	.152	.259
DIS_2	354	4	1	5	772	2.18	.052	.982	.964	.894	.130	.388	.259
OL_1	354	4	1	5	847	2.39	.054	1.019	1.038	.544	.130	-.083	.259
OL_3	354	4	1	5	733	2.07	.051	.957	.916	.600	.130	-.307	.259
SE_2	354	4	1	5	727	2.05	.047	.891	.793	.766	.130	.581	.259
SE_3	354	4	1	5	682	1.93	.050	.946	.895	.934	.130	.573	.259
PP_3	354	4	1	5	1031	2.91	.062	1.171	1.372	.267	.130	-.856	.259
PP_4	354	4	1	5	962	2.72	.057	1.075	1.155	.458	.130	-.547	.259
PI_1	354	4	1	5	948	2.68	.053	.995	.989	.247	.130	-.557	.259
PI_2	354	4	1	5	1000	2.82	.055	1.039	1.080	.127	.130	-.691	.259
PI_3	354	4	1	5	989	2.79	.055	1.040	1.082	.269	.130	-.715	.259
PI_4	354	4	1	5	924	2.61	.056	1.051	1.105	.288	.130	-.736	.259
Age	354	4	1	5	728	2.06	.055	1.031	1.062	.902	.130	.323	.259
City	354	23	1	24	666	1.88	.188	3.541	12.541	4.679	.130	23.094	.259

How do you identify your gender?	354	2	1	3	517	1.46	.027	.516	.266	.346	.130	-1.444	.259
What is your highest level of education completed?	354	4	1	5	962	2.72	.044	.828	.685	.085	.130	-.353	.259
What is your current relationship status?	354	4	1	5	499	1.41	.041	.767	.588	1.804	.130	2.474	.259
Which of the following categories best describes your employment status?	354	5	1	6	778	2.20	.063	1.178	1.389	.457	.130	-.908	.259
What is your	354	2	1	3	401	1.13	.025	.472	.223	3.482	.130	10.644	.259

current geographic location?													
Which of the following best describes your current occupation?	354	23	0	23	2296	6.49	.379	7.125	50.760	1.014	.130	-.387	.259
Valid N (listwise)	354												

Limitation

The study has some limitations to note. Firstly, it relied on self-reported perceptions of repetitive behavior which could introduce biases related to social desirability or response consistency. Additionally, participants' responses may have been influenced by individual differences or situational contexts not accounted for in the study design. While the communalities indicated that the latent factor explained a substantial amount of the variance in respondents' ratings, further validation of the findings through complementary methodologies or replication studies is necessary to confirm the robustness of the results and ensure their generalizability across different populations and contexts. It's also important to note that the study's sample size and demographics may limit the generalizability of the findings to broader populations. Moreover, to mitigate the limitations of convenience sampling, researchers can employ supplementary techniques such as stratification or quota sampling to enhance the representativeness of the sample within practical constraints. Therefore, it's advised exercising caution when interpreting the results, and future research should address these limitations to provide a more comprehensive understanding of the theory of Perseverance.

CONCLUSION

The objective of this study was to evaluate a proposed model of perseverance against observed data, assess the reliability of a measurement scale, and investigate potential biases within the dataset. The results suggest that while the default model shows moderate fit, the refined model offers significant improvements, indicating a more accurate depiction of variable relationships. Furthermore, the measurement scale utilized in the study demonstrates satisfactory reliability. However, the presence of potential biases within the dataset requires further investigation. These findings offer valuable insights into proposed models, measurement scales, and potential biases within datasets, advancing the field of psychological research. This study builds upon existing psychological and motivational theories to develop a conceptual model of perseverance. Through quantitative analysis, including descriptive statistics and fit indices, the study provides a comprehensive evaluation of the proposed model and measurement scale. Despite its contributions, the study acknowledges several limitations, such as the potential biases introduced by self-reported perceptions of repetitive behavior and the limited generalizability of findings due to sample size and demographics. Further validation through complementary methodologies or replication studies is necessary to confirm the robustness of results and their applicability across diverse populations and contexts. In conclusion, this study offers valuable insights into the complexities of perseverance and underscores the importance of considering model fit, scale reliability, and potential biases in psychological research. Addressing these factors is crucial for advancing our understanding of perseverance and developing interventions aimed at promoting resilience and goal achievement in various contexts.

Informed Consent Procedure

Prior to participation, all respondents provided informed consent electronically via SurveyMonkey. The consent statement outlined the voluntary nature of participation, the intended use of personal information, confidentiality measures, and contact information for the researcher. Participants acknowledged their agreement by clicking an "I agree" button. This procedure ensured that participants were fully informed of their rights and the purpose of the study before providing their responses.

REFERENCE

- Anderson, C. A., Lepper, M. R., & Ross, L. (1980). Perseverance of social theories: The role of explanation in the persistence of discredited information. *Journal of Personality and Social Psychology*, *39*(6), 1037–1049. <https://doi.org/10.1037/h0077720>
- Anshel, M. H., Sutarso, T., & Sozen, D. (2012). Relationship between cognitive appraisal and coping style following acute stress among male and female Turkish athletes. *International Journal of Sport and Exercise Psychology*, *10*(4), 290–304. <https://doi.org/10.1080/1612197X.2012.687073>
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, *50*(2), 248–287. [https://doi.org/10.1016/0749-5978\(91\)90022-L](https://doi.org/10.1016/0749-5978(91)90022-L)
- Bandura, A., & Walters, R. (1977). Social learning theory. In *The Routledge Companion to Criminological Theory and Concepts*. Englewood Cliffs, NJ: Prentice-Hall.
- Domaradzka, E., & Fajkowska, M. (2018). Cognitive emotion regulation strategies in anxiety and depression understood as types of personality. *Frontiers in Psychology*, *9*(JUN), 1–12. <https://doi.org/10.3389/fpsyg.2018.00856>
- Garnefski, N., & Kraaij, V. (2007). The Cognitive Emotion Regulation Questionnaire. *European Journal of Psychological Assessment*, *23*(3), 141–149. <https://doi.org/10.1027/1015-5759.23.3.141>
- Gerhards, L., & Gravert, C. (2020). Because of you I did not give up – Peer effects in perseverance. *Journal of Economic Psychology*, *81*(January), 102316. <https://doi.org/10.1016/j.joep.2020.102316>
- Khan, W. A., Wafa, S. A., Hassan, R. A., & Kashif, U. (2019). The mediating effect of innovation on the relationship between organizational culture and performance of large manufacturing firms in Pakistan. *Malaysian Journal of Business and Economics (MJBE)*, *6*(2), 229–229.
- Liu, R. W., Lapinski, M. K., Kerr, J. M., Zhao, J., Bum, T., & Lu, Z. (2022). Culture and Social Norms: Development and Application of a Model for Culturally Contextualized Communication Measurement (MC3M). *Frontiers in Communication*, *6*(January), 1–15. <https://doi.org/10.3389/fcomm.2021.770513>
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal

- setting and task motivation: A 35-year odyssey. *American Psychologist*, 57(9), 705–717. <https://doi.org/10.1037/0003-066X.57.9.705>
- Pakistan, G. (2023). *Pakistan's Foremost Research Lab*. <https://gallup.com.pk/post/35567>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Sekaran, U., & Bougie, R. (2016). *Research Methods For Business: A Skill Building Approach - Uma Sekaran, Roger Bougie - Google Books* (7th ed.). John Wiley & Sons, Ltd.
- Tajfel, H. (1982). Social Psychology of intergroup relations. *Annual Review of Psychology*, 26(2000), 1–39.