Analyzing the Influence of Emotional Intelligence on Investor Behavior in Developing Regions: A PRISMA Systematic Review

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Abstract: Background: This article aims to systematically review studies analyzing the influence of emotional intelligence (EI) on investor behaviors in developing countries (as defined by the United Nations Development Program) using PRISMA. In developing nations, the lack of investigation in this area is prevalent and nonexistent in some nations. Methods: EI and investor behavior-related papers in English were selected from ProQuest, EBSCO, and Google Scholar database searches in developing countries. Results: The review included 19 studies covering eight developing countries, extending the conclusion of a positive correlation between EI and investment decisions in growing regions. However, inconsistencies and gaps exist in the EI model adoption and investor behaviors. Evidence Limitation/Implications: Limitations include the need for extended EI and investor behavior dimensions and more geographic coverage. Important implication highlights include how EI helps investors enhance investment decision-making. Originality/value: This unprecedented PRISMA review of a comprehensive set of literature on the influence of EI on investor behavior in developing countries extends the current evidence base in this area.

Keywords: Developing Countries, Emotional Intelligence, Investor Behavior, PRISMA, Systematic Review.

I. INTRODUCTION

Emotional intelligence (EI) involves comprehending, exploring, and showing emotions that control actions and decisions [21]. In addition, research suggests that investor EI is a critical factor in financial decision-making [5], [15], [20], [25]. Despite the importance of this topic, the body of knowledge on the impact of EI on investor behavior is limited [6]. Contemporary researchers recommend expanding future EI and investor behavior studies [2], [10]. In some developing nations, the lack of investigation in this area is prevalent and nonexistent in some countries. The objective of this review is to investigate the influence of EI on investor behavior in developing countries (as labeled by the United Nations.

Development Program (UNDP)) [26], adopting the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) [18].

The research questions for this study include: what is the influence of EI on investor behavior in developing countries, and which EI components positively significantly impact investor behavior? The review will proceed with an outline of the methodology used and follow with a presentation of the results.

II. METHODOLOGY

The researchers' systematic review methodology adopted to search, screen, select, and collect data from the studies is detailed in Table- I [18].

Table- I: Methods Checklist items

Topic	Checklist Item
Eligibility Criteria	The researchers included the English language quantitative published papers and dissertations from the database search in EI and investor behavior in developing countries (as defined by the United Nations Development Program (UNDP)). Other areas, duplicates, Abstract only papers, theses, Conference Proceedings, and reviews, were excluded.
Search Strategy	The "(emotional intelligence OR EQ) AND (investor* OR investment* OR investing)" search string was used and filtered by abstracts in EBSCO and ProQuest. The eight search strings were used in Google Scholar filtered by title: "emotional intelligence investor, emotional intelligence investors, emotional intelligence investment, emotional intelligence investing, EQ investor, EQ investors, EQ investment, and EQ investing."
Information Sources	One researcher searched three popular business databases, EBSCO, ProQuest, and Google Scholar, to identify studies on April 14, 2022, exported search results to Excel, and removed duplicates. A second researcher cross-checked the extracted data.
Screening, Selection, and Data Collection Process	One researcher used the narrative approach to screen each record abstract and title for EI and investor behavior subject area and then for full-text report retrieval, then for selection for inclusion in the study papers on the topic with developing countries (as defined by the United Nations Development Program (UNDP)). Excel worksheet was used for the selection process and recording decisions. A second researcher cross-checked the extracted data.
Data Items	One researcher extracted data items from full-text journal articles selected for inclusion in the study and documented them in the excel worksheet (author, title, year of publication, objective, methodology, EI variables, country, findings, number of participants, sample population, scale, instrument). A second researcher cross-checked the extracted data.

III. RESULTS

A. Study Selection and Results

One researcher recorded search, screening, and selection process results (from the 585 records identified in the ProQuest, EBSCO, and Google Scholar database search) to obtain the nineteen studies included in the review) see the PRISMA flow diagram [18] (see Fig.1)
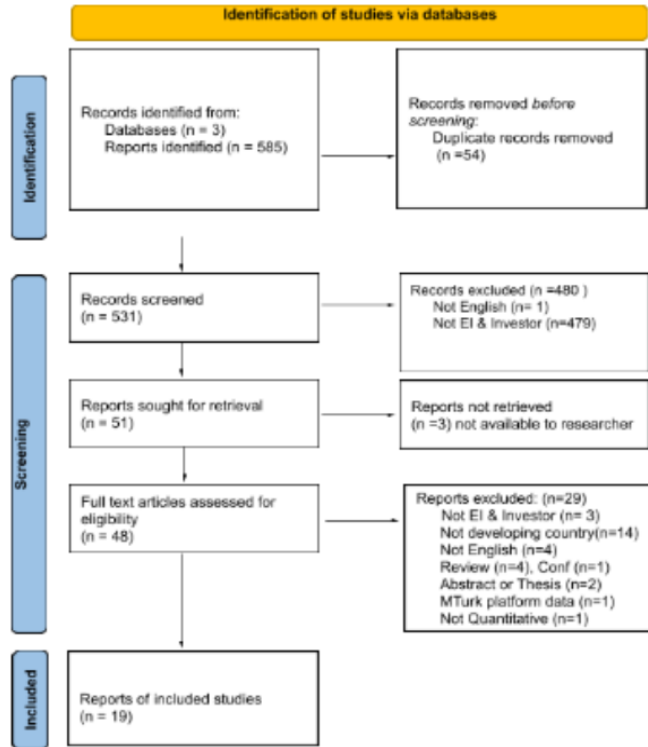

Fig.1. Search, screening, and selection process results in PRISMA flow diagram (Page et al., 2021)

The researcher also cited and presented the characteristics of each included study in Table- II. The published dates were between 2014 and 2022. There were eight developing countries in the evidence. Developing regions not represented in the review body of literature included the seventeen European and Central Asia countries and the thirty-three Latin American and Caribbean countries or territories (see Fig. 2).

Table- II: Characteristics for each included study

#	Cite	Year Pub	Sample Size	Country	Behavioral bias focus
1	(Ahmad, 2018)	2018	455	Pakistan	Investor behavior [a]
2	(Arora, 2016) [c]	2016	740	India	Behavioral, risk preferences, and stock market participation
3	(Asamoah et al., 2021)	2021	255	Ghana	Investor behavior and decisions [b]
4	(Dhiman & Raheja, 2018)	2018	500	India	Risk tolerance [b]
5	(El-Chaarani, 2016)	2016	197	Lebanon	Portfolio performance [a]
6	(Gupta et al., 2019)	2019	454	India	Investment decisions [a]
7	(Hadi, 2017)	2017	150	Pakistan	Investment decisions
8	(Jamil & Bashir 2021).	2021	294	Pakistan	Decision making
9	(Johnsi & Sunitha, 2019)	2019	120	Saudi Arabia	Investor behavior [b]
10	(Lubis et al., 2015)	2015	320	Malaysia	Investment decision
11	(Munir & Kumar, 2018)	2018	300	Pakistan	Investment behavior
12	(Munir, 2020)	2020	300	India	Investment behavior
13	(Pirayesh, 2014)	2014	270	Iran	Investment decisions.
14	(Pour, A. Z., & Miladiyan)	2014	1394	Iran	Financial behavior
15	(Raheja & Dhiman, 2020)	2020	500	India	Investment decisions [b]
16	(Salehi & Mohammadi, 2017)	2017	150	Iran	Decision-making quality
17	(Sashikala, 2017) [c]	2017	430	India	Risk aversion, behavioral factors, and investment intention.
18	(Saweris et al., 2022)	2022	212	Egypt, data only	Investment decisions
19	(Varzaneh & Aliahmadi, 2015)	2015	105	Iran	Decision-making styles

[a.] adopts fragments of Mayer EI 4 Dimension Model, [b.] Adopts a Goleman EI 4- or 5-Dimension Model, [c.] Dissertation.
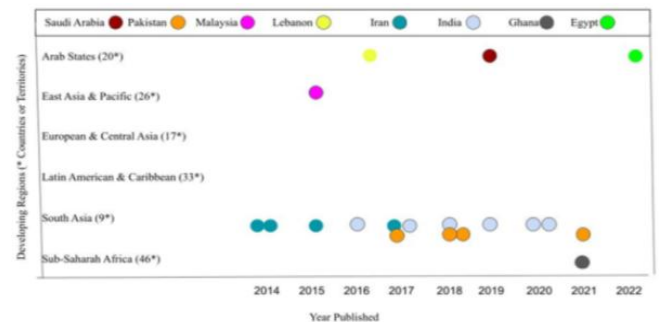
Each circle in this diagram corresponds to the country of each study included in the evidence base

Fig. 2. Illustration of Evidence Base Mapping by Developing Region

The aim of the first research question was to identify the influence of EI on investor behavior in developing countries. Consistent with contemporary research in this area [2], [5], [6]. EI was concluded to have a positive, statistically significant influence on investor behavior based on the analysis of literature included in this study [1], [4], [17].

The aim of the second research question was to identify the positive impact of the different EI components on investor behavior. Although a large part of the body of literature can be criticized for not analyzing the components of EI, three

studies' hypotheses adopt Goleman's five-dimension model of the EI framework, one study's hypothesis adopts Goldman's four-dimension EI model [9], and another study's hypothesis adopts fragments of Mayer's four-domain model.

Although few studies assessed common EI and Investor Behavior variable dimensions, the various EI components assessed positively impacted investor behaviors differently (see Table- III). This is important because EI is a critical factor in maximizing wealth [22] and understanding the effect of each EI component on the Investor Behavior variables can provide insight into the likelihood of achieving more incredible wealth [6]. For example, risk is a vital factor in financial decision-making, and the higher the risk tolerance, the more significant the risk is taken [7]. Investors with self-awareness (SEA) had the most behavioral bias. SEA was correlated positively with risk tolerance [7], risk aversion [14], locus of control, investment decisions [20], herding [4], loss aversion (LOA), excessive trading (EXT), overconfidence, overreaction (OVR), mental accounting, and portfolio switching (POR).

Table- III: Positively Correlated EI Components to Investor Behavior Bias 0or Each Study.

#	Cite	RQ2: Which EI components positively impact IB. EI component (Positively impacted Investor Behavior variable)
3	(Asamoah et al., 2021)	SEA[n]/ REM[l] (POR[l], OVR[j], EXT[e], LOA[g], Herding, Mental Accounting, Overconfidence). REM[m] (portfolio diversification). SEM[o] (Mental Accounting, portfolio diversification)
4	(Dhiman & Raheja, 2018)	SEA/ HAE[f] (Risk Tolerance)
6	(Gupta et al., 2019)	USE[p]/ MOE[h]/ MAE[r]/ PEE[k] (Investment Decisions)
9	(Johnsi & Sunitha, 2019)	SEA (Risk Aversion, Locus of control), EMP[d] (location of control), SOS[p] (Risk Aversion, locus of control, overconfidence), MAE (overconfidence)
15	(Raheja & Dhiman, 2020)	SEA/ HAE/ MOT[i]/ SOS (Investment Decisions)

[d.] EMP=Empathy, [e.] EXT= Excessive Trading, [f.] HAE= Handling Emotions, [g.] LOA= Loss Aversion, [h] MOE= Managing Others Emotions, [i.] MOT =Motivation, [j.] OVR= Overreaction, [k.] PEE=Perceiving Emotions, [l.] POR= Portfolio Switching, [m.] REM=Relationship Management, [n.] SEA= Self-awareness, [o.] SEM= Self-management, [p.] SOS=Social Skills, [q.] USE=Using Emotions. [r.] MAE=Managing Emotions.

IV. DISCUSSION AND CONCLUSION

This study used the PRISMA methodology to review a comprehensive set of literature on the influence of EI on investor behavior in developing countries and extends the body of literature in this area. This review aimed to identify the impact of EI on investor behavior in developing countries and the EI components that positively impact investor behavior. Consistent with previously published research, the results indicate that EI tends to positively impact investor behavior in Developing Countries. The EI components also assessed positively impacted investor behaviors differently. Although the study implies a correlation of EI to investor behavior in developing countries, regions such as Tropical Islands are underrepresented in the evidence base. Another weakness is the lack of depth of EI components and investor behaviors frameworks limiting the ability to analyze across studies and regions. In addition, there is a need to analyze the impact of other variables highlighted in the study outside the scope of this review. Thus, future research can be expanded to unrepresented tropical islands such as Jamaica and expand EI to include the analysis of personality traits, financial literacy, and the anatomy of emotions on investor behavior.

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