



Do character strengths play any role in corrupt behaviour? Exploring the influence of optimism and gratitude on corruption among Nigerians

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ABSTRACT

Descriptions of the psychological character strengths show that they might be beneficial in tackling antisocial and criminal behaviours. However, this line of thought has remained largely unexplored. In the present study, focusing on Nigerians, we explored the possibility that dispositional optimism and gratitude undermine the inclination to be corrupt, a crime that has ravaged the country and is being blamed for the underdevelopment of the nation. We employed a survey method in which respondents completed relevant self-report measures. Data was analysed majorly with hierarchical regression analysis. Result of the analysis showed that males were more likely to be corrupt than their female counterparts. The character strength of optimism significantly undermined individuals' tendency to engage in corrupt behaviours. However, this effect of optimism did not occur among the younger participants. Gratitude failed to exert a direct significant effect on inclination to engage in corruption, but higher levels of gratitude boosted the negative influence of optimism on inclination to engage in corruption. Generally, the present study has demonstrated the efficacy of character strength in counteracting corruption and, in line with other emerging findings, increases the call for more and expanded efforts towards unravelling the possible beneficial effects of character strengths in addressing antisocial and criminal behaviours.

Introduction

In 2004, Christopher Peterson and Martin E. P. Seligman, along with other scholars, published a seminal work on human character and virtue in a book titled *Character Strengths and Virtue: A Handbook and Classification* (Peterson & Seligman, 2004). The wide-ranging postulations in the book on how character strengths are equipped to improve human well-being set the stage for the subsequent interrogation of how the various character strengths outlined in the book improve well-being. Consequently, the literature is now awash with how the character strengths influence variations in human well-being (see Rashid & Niemiec, 2020; Ruch & Stahlmann, 2019). Nevertheless, aside the possible influence of character strengths on well-being, Peterson and Seligman (2004) equally observed that character strength “offers a framework for a systematic investigation into character and virtue through positive traits which account for individual differences in morally valued behaviour” (pp. 3). Unfortunately, this particular line of postulation has remained largely unexplored. A closer look at the theoretical exposition of character strengths by Peterson and Seligman (2004), especially as it concerns characters under the transcendence dimension, offers plausible proposition, which suggests that character strengths possess potentials that are capable of not only

enhancing well-being but also capable of undermining criminal and antisocial behaviour (see Crossan et al., 2013; Tweed et al., 2011).

Consequently, the aim of the present study is to examine the relationship between character strengths and corruption. Specifically, we examined the roles of optimism and gratitude, two character strengths under the broader virtue of transcendence, in the tendency to be corrupt among Nigerians. Although corruption is considered a worldwide problem (Beyaert et al., 2023), we focused on Nigeria because corruption is particularly endemic in the country and is seriously being blamed for her current state of underdevelopment (Fagbemi et al., 2022; Uddin & Rahman, 2022). The country has consistently ranked among the most corrupt nations on earth for the past 10 years (Akinlo, 2022). In the latest Transparency International (TI) ranking of countries on the Corruption Perception Index (CPI), Nigeria scored 24/100 and was ranked 150th among 180 countries that were involved in the ranking (TI, 2023). Thus, in addition to unravelling the relationship between character strengths and corruption among Nigerians, our study will contribute to the emerging psychological perspectives on corruption generally. A glimpse into the literature shows that most of the studies on corruption, providing etymological analysis of the construct, solutions, and intervention strategies, are greatly skewed in favour

of political and economic perspectives, with far less emphasis on psychologically oriented studies (Agbo & Iwundu, 2016; Vilanova et al., 2022).

Even most of the psychologically inspired studies on corruption focused largely on corruption within organizations (see Ashforth & Anand, 2003; Moore & Gino, 2013; Casciaro et al., 2014), a condition that may have also contributed in the limited application of psychological perspectives in the study of against corruption within the general population. Consequently, in the current paper, we take an approach that allows us to examine the impact of dispositional optimism and gratitude on corruption within the general population. To this end, we start by conceptualizing corruption as a criminal tendency capable of existing within any individual. Thereafter, we explored studies that have directly or indirectly highlighted the possibilities that both optimism and gratitude are equipped with the potentials to exert desirable effects on the tendency to be corrupt.

Corruption as a tendency

The term 'corruption' has been variously defined, but most scholars seem to prefer the perspective that views corruption as the misuse of public office or entrusted power for private gain (Treisman, 2007). In 2016, Agbo and Iwundu unpacked this definition, arguing that its general acceptance appears to have contributed to the dearth of the application of psychological methods and perspectives in the study of the phenomenon even though corruption clearly qualifies as a criminal behaviour and amenable to age-long psychologically developed traditions and methods in the field of criminal behaviour. According to Agbo and Iwundu (2016), this popular conceptualisation seems to place emphasis on behaviours that have already occurred. It is therefore not surprising that the major indicators and measurements of corruption in the literature are largely objective in nature, such as the number of people convicted of corruption charges, the amount of funds unaccounted for, number of cases reported to legal institutions, or the amount of money illegally moved from one place to another (Golden & Picci, 2005; Huisman & Vande Walle, 2010). The implication of this lopsided understanding is that the age-long well-developed psychological traditions and methods that acknowledge criminal disposition, intention, or attitude as important cognitive activities in criminal processes are largely neglected. Whereas objective measures are important in the study of criminal behaviours, Huisman and Vande Walle (2010) have made it clear that covert cognitive processes, such as inherent potentials, personal dispositions, and attitudes are not just important in understanding the progression that corrupt thoughts take to manifest into corrupt behaviours, but equally underscore the incubation, motivation, and maintenance of both pre- and post-corrupt behaviours.

Consequently, interest in criminal inclination is not just a matter of research endeavour and convenience, but an important route through which scholars provide critical answers to questions that objective and situational approaches may never be able to

address. Efforts towards understanding criminal disposition and inclination have proved very resourceful. It helps to explain why people exposed to similar opportunities, circumstances, and conditions can differ in their criminal conducts, as well as when people are likely to engage in criminal behaviour (Gottfredson & Hirschi, 1990). Consequently, according to Agbo and Iwundu (2016), since corruption is a criminal behaviour, there is no reason why the age-long well-developed psychological methods and perspectives on criminal behaviours cannot be employed in the study of corruption. Therefore, along with the psychological perspective that individuals are differentially endowed with the tendency to engage in criminal behaviour, Agbo and Iwundu (2016) argued that people are differentially endowed with the tendency to engage in corruption. In summary, the authors defined corruption as “the inclination to misuse public trust for personal gains” (Agbo & Iwundu, 2016, p. 34). Like many other kinds of criminal behaviours, they contend that this tendency is equally measurable. Consequently, they developed a 16-item questionnaire that assesses this tendency to be corrupt. The current study is anchored on this perspective. Hence, our aim is to unravel the influence of optimism and gratitude on the tendency to be corrupt among Nigerians.

Optimism and the tendency to be corrupt

Apparently, there is dearth of studies on the direct relationship between optimism and corruption. However, we draw insights from two major strands of literature to underscore our suspicion that optimism is related to the tendency to engage in corruption. The first line of insight comes from the theoretical description of optimism. The second line of insight comes from studies that examined the relationship between optimism-related dispositions and corruption. We also draw from studies that examined the relationship between corruption and dispositions that are significant opposites of optimism. Peterson and Seligman (2004) referred to these opposite dispositions as the “nonfelicitous opposite” (pp. 528). Gleaning from these lines of studies will help shed light on the possible relationship between optimism and the tendency to be corrupt.

Optimism is defined as a “generalized, relatively stable tendency to expect good outcomes across important life domains” (Scheier & Carver, 2018, p. 1082). This expectation is distinguishable from mere and ordinary expectations that people experience often. It is an expectation that persists even in the face of difficulties and challenges. It transcends a mere belief that things would be good and emphasizes an intrinsically motivated energy that does not just expect a better future but equally involves an inner resolve to withstand expected shocks, challenges, and negative experiences that may emerge during the expectation period. According to Peterson and Seligman (2004), it involves “thinking about the future, expecting that desired events and outcomes will occur, acting in ways believed to make them more likely, and feeling confident that these will ensue given appropriate efforts, sustain good cheer in the here and now and galvanize goal-directed actions” (p. 527). Hence, optimistic people do not just expect 'manna from

heaven' but work towards achieving the expected goal. Peterson and Seligman (2004) averred that optimistic people make an investment in their expectations in addition to their positive mindset. Importantly, the authors described optimism as a morally valued disposition. In fact, they described it as a disposition that members of the society would proudly wish their children to cultivate. In other words, optimistic people are moral standards of the society and are, therefore, less likely to take immoral routes in the pursuit of their expectations and goals.

One other line of insight comes from the relationship between related depositions, such as intrinsic motivation, and criminal/corrupt behaviours. According to Peterson and Seligman (2004), optimism is a transcendent character, and transcendent characters are intrinsically motivated dispositions. It is, therefore, not surprising that studies show that optimism facilitates engagement and persistence (Peterson, 2000), which are two important descriptors of intrinsic motivation (Marinak & Gambrell, 2008; Walker et al., 2006). Interestingly, there is an avalanche of evidence, showing that intrinsic motivation is antithetical to criminal behaviours, such as cheating, fraud and antisocial behaviours (e.g., Csikszentmihalyi, 2014; Sheehy & Hodge, 2015), including corrupt behaviours (Agbo & Iwundu, 2016). It may, therefore, not be overreaching to suspect that optimism has the potential to undermine the tendency to be corrupt since it is positively and strongly associated with other dispositions, such as intrinsic motivation, which have been shown to antagonize criminal tendencies.

Another line of research that appears to link optimism with corruption comes from studies on culture and corruption, especially studies that employed Hofstede's (1980, 1990) cultural framework. One of the dimensions of the framework is uncertainty avoidance. The description of uncertainty avoidance appears very similar to that of pessimism, which is the literal opposite of optimism and is classifiable among those dispositions that Peterson and Seligman referred to as "nonfelicitous opposite" (pp. 528). Uncertainty avoidance refers to "the extent to which members of a culture feel threatened by uncertainty or unknown situations" (Hofstede, 1991, p. 113). It describes a situation where people are not sure of what the future holds for them within their society. It denotes the unpredictability of situations, hopelessness, and psychological insecurity. Results from studies that have examined the influence of uncertainty avoidance on corruption seem to agree unanimously that corruption is often likely to thrive under uncertain conditions (Getz & Volkema, 2001). In other words, corruption is less likely under an optimistic atmosphere. Other lines of evidence come from the relationship between optimism and factors that have been shown to be antithetical to conditions that potentiate corrupt behaviours. For instance, studies show that when people are optimistic, they are willing to persist in their endeavours, and eager to learn and achieve competencies (Carver et al., 2010; Geers et al., 2009). Interestingly, these dispositions have been shown to have negative relationship with factors that potentiate corrupt behaviours, such as extrinsic

motivation (Agbo & Iwundu, 2016). Optimism has equally been shown to be antithetical to fear and feelings of job insecurity in organizations. Interestingly also, fear and feelings of insecurity have been shown to aid corrupt conducts and intentions in organizations (Bosman et al., 2005; Van den Broeck et al., 2014).

In summary, although there is dearth of studies on the direct relationship between transcendent character strength of optimism and corruption, both the theoretical explications of the character strength and deductions from relevant studies suggest that optimism has the potential to weaken people's urge or inclination to engage in corrupt behaviour. Nevertheless, given the lack of studies on the direct relationship between optimism and corruption, especially among Nigerians, we take the exploratory approach and observe how the result will emerge.

Gratitude and the tendency to be corrupt

Gratitude is a character strength that has received substantial scholarly attention (Jans-Beken et al., 2020). Peterson and Seligman (2004) conceived gratitude as being thankful for a gift. According to Nelson and Lyumbomirsky (2016), gratitude entails "the recognition of a positive outcome from an external source, including a felt sense of wonder or thankfulness for a benefit received" (p. 277). Some other scholars believe that gratitude goes beyond having a sense of thankfulness. In line with Peterson and Seligman's (2004) classification, these scholars define gratitude in terms of its transcendent qualities. For instance, Jans-Beken et al. (2020) observed that gratitude is a "wider life orientation towards noticing and being grateful for the positive in the world" (p. 743). It is the tendency to acknowledge, in a benevolent and receptive manner, the kindness and goodness one received from external sources (Lomas et al., 2014). These external sources could be fellow humans, nature, or the God/gods (Emmons et al., 2003). Individuals who show a great deal of gratitude are often more likely to recognize the contribution of others and to express appreciation when appropriate and are equally less eager to demand gratitude from others (Lomas et al., 2014).

Like optimism, there is dearth of studies on the direct role of gratitude in corruption and criminal behaviours. Hence, we draw insights from the theoretical underpinnings of gratitude as well as from studies that have examined the relationship between gratitude-related dispositions and corrupt behaviours. These related dispositions include the "nonfelicitous opposite" as earlier observed (see Peterson & Seligman, 2004, p.528). Starting with theoretical insights, a closer look at elements and indicators of gratitude suggests that gratitude is inimical to corrupt intentions. First, Peterson and Seligman (2004) described gratitude as a transcendent strength and a socially desirable moral virtue. As a moral virtue, it is clearly dissociated from immoral actions. It is further described as a character that promotes reciprocity (Jans-Beken, et al., 2020). It is a character strength that energizes the feelings that the world has been benevolent to someone, a condition that has the potential to motivate desirable reciprocal social behaviour, which is why McCullough et

al. (2002) argued that being gratuitous involves the tendency to “respond with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes that one obtains” (pp. 112). From all these theoretical and conceptual understandings of gratitude, one point that clearly stands out, with a plausible implication for moral and criminal behaviour, is that gratitude pertains to the motivation to reciprocate positively; to give back in appreciation. Interestingly, this motivation to reciprocate is not always targeted at the perceived benefactor but largely takes a transcendent nature in which the giving back is often directed at the entire society (Spence, 2010). A plausible implication of this type of mindset is that individuals consumed with the thoughts of giving back to society will be less likely to cultivate the intention to defraud and steal from the same society they want to reward. Hence, it is cogent to suspect that people with substantial levels of gratitude are less likely to hold corrupt intentions.

Findings in other related areas seem to be consistent with the hunch that gratitude is a likely antagonist of the tendency to be corrupt. Prominent among these studies is the finding that gratitude helps undermine antisocial behaviours. For instance, Bono et al. (2019) observed that adolescents who continue to develop a sense of gratitude were less likely to engage in antisocial and criminal behaviours. Studies also show that gratitude is positively associated with behaviours and dispositions that are considered antithetical to criminal and corrupt conducts. For instance, Spence (2010) found that gratitude potentiated workers' sense of citizenship behaviour, which is a type of intrinsically motivated workplace behaviour in which employees go beyond the officially assigned work roles to engage in other selflessly motivated behaviours that benefit their organizations or co-employees. Interestingly, citizenship behaviour has been shown to undermine deviant conducts (Abbasi et al., 2021; Fox et al., 2012). Studies also show that gratitude promotes pro-social behaviour (Jans-Beken et al., 2020), which has been shown to antagonize criminal and antisocial behaviours (Carlo et al., 2014). In fact, there are indications that pro-social behaviour undermines corruption (Spadaro et al., in-press). Going by these findings, it is reasonable to anticipate an antagonistic relationship between gratitude and the tendency to be corrupt.

Summary of the study aims

The aims of the present study are grounded on the call by Tweed et. al. (2011) who argued that character strengths, in addition to being beneficial to well-being, are equipped with the potentials to undermine undesirable social behaviours. They contended, for instance, that if gratitude can enhance behaviours that are incompatible with undesirable social behaviours, such as violence, then there is the possibility that it can directly undermine violence. Consequently, they called on scholars to put more effort into unravelling the links between character strengths and undesirable social behaviours. But as we had earlier observed, this call has not received an appreciable attention, especially as it concerns the character strengths of optimism and gratitude. Nevertheless, as portrayed in the theoretical explications of both gratitude and

optimism, the constituents of these character strengths coupled with findings from related studies strongly suggest an inverse relationship between the character strengths and corrupt inclinations. Hence, we predict that both optimism and gratitude will be negatively related to corrupt tendencies.

Method

Participants

Data for the current study were culled from a large survey of three hundred and sixty-one (361) undergraduates from a federal university located in the south-eastern part of Nigeria. Females accounted for 52.6% ($n = 190$) of the participants, whereas males accounted for 47.4% ($n = 171$). Participants were aged between 16 years and 35 years (Mean = 20.35 years, $SD = 2.92$). The majority of the participants were Christians ($n = 351$, 97%) and were from the Igbo-speaking people of Nigeria ($n = 322$, 90%). Similarly, most of the respondents were unmarried ($n = 355$, 98.3%). The skewed nature of the religion and ethnic composition of the respondents is attributable to the location of the study. Southeastern Nigeria, where the study was conducted, is predominantly occupied by the Igbo-speaking people of Nigeria and Christianity is the dominant religion among the Igbo tribe.

Materials

Optimism: Optimism was assessed with the optimism dimension of the *Comprehensive Inventory of Thriving* (CIT). The CIT was developed as a comprehensive tool for the assessment of the character strengths commonly employed in the field of well-being (Su et al., 2014). The optimism dimension is made up of three items (*I have a positive outlook on life; I am optimistic about my future; I expect more good things in my life than bad*). Respondents rated their degree of agreement with each item on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). The reliability of the scale was assessed with both Cronbach's and ordinal reliability methods and reliability coefficients of 0.89 and 0.92 were obtained, respectively.

Corruption: We assessed corruption with an abridged version of the *Corruption Propensity Scale* (CPS, Agbo & Iwundu, 2016). The CPS was developed to assess individuals' tendency to engage in corrupt behaviours. The original version of the scale has 16 items, but the brief version is made up of five items (1. *If I will get my cut, I will assist my boss do whatever he/she wants*; 2. *There is no way I can make it big where I work if I don't find a way to redirect funds to myself*; 3. *As long as I will be well compensated, I will release officially classified information to whoever needs it*; 4. *Once I have the opportunity, I will claim allowances, as much as I can, whether correct or not, since that's one way to get my cut of the national cake*; 5. *I don't mind favouring a client for a bribe*). Respondents rated their agreement with each item on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). The scale yielded reliability coefficients of 0.89 and 0.96 with the Cronbach's alpha and ordinal reliability methods, respectively.

Gratitude: We assessed gratitude with the 6-item Gratitude Questionnaire (e.g., *I have so much in life to be thankful for; I am grateful to a wide variety of people*; McCullough et al., 2002). The scale assesses the global tendency to return appreciation, thanks, and gratefulness for favour or kindness received from both close and distant others, including nature. Participants rated their level of agreement on each item on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). The scale yielded reliability coefficients of .88 and .92 with Cronbach's alpha and ordinal reliability methods, respectively.

Procedure

First, we obtained approval from the Research Ethics Committee of the University where the study was conducted. Consequently, the study followed all the laid down regulations that guide research involving human participants in the university. Respondents completed an informed consent form before completing the questionnaire. Importantly, participation was voluntary and, as part of the guideline, respondents were informed that their responses would be used purely for research purposes and would not in any way be used in assessing their academic performance. They completed the questionnaire in group while in their various classes. Before returning the questionnaire, respondents were requested to crosscheck if there were/was any uncompleted item(s). This measure was taken to eliminate the incidence of missing values. Thereafter, the questionnaires were collected, and the participants were thanked for their participation. In addition, extra credit hour was added to their normal class period to make up for the time they used in completing the questionnaire.

Statistical analysis

We employed hierarchical regression analysis to test the influence of the character strengths on the intention to be corrupt. To build the equation, age and gender were entered in the first step (step 1) as covariates. Females were coded 1 and males were coded 2. Other demographic variables, such as marital status, ethnic group, and religious affiliation were not added because there were very little variations within each of the variables. Optimism and gratitude were added into the equation in step 2. The interaction term, involving gratitude and optimism (gratitude x optimism), was added in step 3. In line with the popular recommendation (see Kraemer & Blasey, 2004; Shieh, 2011), both optimism and gratitude were centred around their means before the interaction term was formed.

Results

Descriptive statistics

Table 1 contains the means, standard deviations, and correlations matrix of the study variables.

Roles of optimism and gratitude in inclination to be corrupt

The result of the regression analysis is shown in Table 2. As can be seen, both age and gender were significantly associated with the inclination to be corrupt. The tendency to be corrupt was

Variables	Mean(SD)	1	2	3	4
1 Gender	-	-			
2 Age	20.29(3.08)	.25	-		
3 Gratitude	34.50(6.51)	-.08	.04	-	
4 Optimism	18.24(3.48)	-.01	.12	.40	-
5 IC	14.69(8.50)	.14	-.07	-.14	-.18

Note: Values in bold are significant, at least, at probability < .05

Roles of optimism and gratitude in inclination to be corrupt

The result of the regression analysis is shown in Table 2. As can be seen, both age and gender were significantly associated with the inclination to be corrupt. The tendency to be corrupt was more likely among younger respondents and males were more likely to engage in corruption than their female counterparts. The addition of the character strengths (step 2) produced an additional significant change in the tendency to be corrupt. As can be seen, optimism was responsible for the additional change. The tendency to be corrupt declined as optimism increased. However, gratitude failed to exert significant direct effect on the inclination to be corrupt.

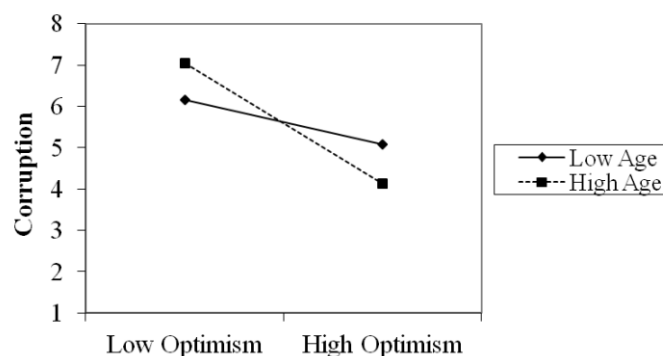


Figure 1: Graph of the interaction effect of optimism and age on inclination to be corruption

However, we explored the possibility that gratitude moderated the influence of optimism on the intentions to engage in corrupt behaviours. This exploration was motivated by two factors. First, gratitude and optimism were significantly correlated (see Table 1). Second, we observed some differences in the relationship between gratitude and corrupt intentions under the correlation and regression analyses. As can be seen in Table 1, gratitude had significant negative correlation with the intention to engage in corruption. However, as can be seen in Table 2, gratitude failed to significantly predict corrupt intentions when added to the regression equation alongside optimism. This pattern of result suggested the existence of a nexus between optimism and gratitude, a nexus that might have had an impact on the intentions to engage in corruption. Thus, we built an interaction term involving optimism and gratitude (optimism x gratitude) and examined its influence on corrupt

inclinations. The interaction term was added to the regression equation in step 3. The overall step yielded significant result: $R=.26$ ($se=8.27$), $F(5, 355)=5.20$, $p=.00$. As can be seen in Table 2, the addition of the interaction term yielded a marginally significant result: $\Delta R=.01$, $F(1, 355)=2.13$, $p=.15$.

The interaction was further explored with version 4 of the PROCESS program (Hayes, 2012). The program computes mediation and moderation in regression models. It allows users to make specifications in accordance with the nature of the input data. It produces different forms of statistical tests. For instance, in addition to the normal hypothesis testing (NHT), it produces biased corrected confidence intervals around coefficients. This gives users the opportunity to know the possible variations in the outcomes of the tested paths when performed under different statistical assumptions, a condition that is expected to help users make cogent decision on the substantiality of the tested paths. We evaluated the effect of the interaction, using the popular method of categorizing the moderator into three levels - (1) scores with 1SD below the mean, (2) scores equal to the mean, and (3) scores with 1SD above the mean. We combined both the NHT and the confidence intervals (CI) to make decision on the substantiality of the interaction effect (the coefficient). The result revealed that the relationship between optimism and inclination to be corrupt was weaker at lower levels of gratitude (that is, at 1SD below the mean) [$coeff = -.27$ ($se = .20$), $t = -1.35$, $p = .18$ ($LCI = -.65$; $UCI = .12$)] compared to the moderate [$coeff = -.38$ ($se = .13$), $t = -2.84$, $p = .00$ ($LCI = -.63$; $UCI = -.12$)] and higher [$coeff = -.48$ ($se = .24$), $t = -2.03$, $p = .04$ ($LCI = -.96$; $UCI = .01$)] levels of gratitude.

Also, in view of the other observed relationships among some variables, we further explored some possible interaction effects, using the same PROCESS program. For instance, as can be seen in Table 1, gender was significantly associated with age, and both variables significantly predicted the tendency to be corrupt (see Table 2). Also, optimism and age were significantly correlated (see Table 1) and both variables were significantly associated with the inclination to engage in corruption (see Table 2). We first examined the effect of gender x age on the tendency to be corrupt. The step yielded an overall significant effect: $R=.19$ ($MSE = 70.53$), $F(3, 356)=4.37$, $p=.00$. A breakdown of the result showed that gender remained significantly related to the tendency to be corrupt: $coeff = 2.83$ ($se = .92$), $t = 3.09$, $p = .00$, 95% CI [1.03, 4.64]. Both age and the interaction term did not show any significant influence on the tendency to be corrupt. Next, we examined the influence of optimism x age on the tendency to be corrupt. The step yielded an overall significant result: $R=.22$ ($MSE = 69.53$), $F(3, 356) = 6.14$, $p = .00$. A breakdown of the result revealed that optimism remained significantly inimical to the tendency to be corrupt: $coeff = -.42$ ($se = .13$), $t = -3.29$, $p = .00$, 95% CI [-.67, -.17]. Although age failed to directly predict the tendency to be corrupt, optimism x age exerted a significant interaction effect on the tendency to be corrupt: $coeff = .06$ ($se = .03$), $t = -2.30$, $p = .02$, 95% CI [-.11, -.01]. The interaction was

further explored by testing the effect of optimism on the tendency to engage in corruption at three different levels of age –1SD below the mean, the mean, and 1SD above the mean. The result showed that optimism was not able to undermine the tendency to be corrupt for the younger respondents (1SD below the mean = -3.08) [effect = -.23 ($se = .15$), $t = -1.53$, $p = .13$ (95% CI = -.53, .07)] but undermined the tendency to be corrupt at the mean (.00) [effect = -.42 ($se = .13$), $t = -3.29$, $p = .00$ (95% CI = -.57, -.17)] and at higher (1SD above the mean = 3.08) [effect = -.60 ($se = .15$), $t = -4.07$, $p = .00$ (95% CI = -.89; -.31)] levels of age (See Figure 1).

Discussion

The articulation and publication of a set of character strengths by Peterson and Seligman (2004) reinforced research in the field of positive psychology largely because of the need to show that health-related psychological studies should not only focus on the negative aspects of human experiences, such as depression and anxiety, but should equally explore how positive human potentials influence human well-being. Expectedly, substantial quantity of studies, showing how character strengths influence human well-being, now exists. However, in addition to their beneficial influence on positive living, Peterson and Seligman (2004) also suggested that the character strengths can equally play significant roles in addressing socially undesirable behaviours, such as criminality. Unfortunately, not much has been done in this regard. Little is known about the impact of the character strengths on socially undesirable behaviours, a condition that motivated Tweed et al. (2011) to urge researchers to start exploring the possibility that character strengths have the potential to undermine antisocial behaviours and attitudes. Thus, we examined the role of the character strengths of optimism and gratitude on the tendency to be corrupt among Nigerians.

As hypothesized, optimism directly undermined the tendency to be corrupt. This result is consistent with the theoretical descriptions and espoused constituents of the character strength and previous findings with related dispositions. Optimism is a resilient disposition that enables people to remain very positive about the future despite prevailing challenges. Therefore, optimistic people are less likely to take illegal routes to achieve their goals. This becomes even more interesting given the current economic and social conditions among Nigerians. The country is currently facing a lot of economic and social challenges that can foster a pessimistic disposition and fear of the future, which are conditions that have been shown to encourage corrupt behaviours (Bosman et al., 2005; Van den Broeck et al., 2014). It has been argued that the agentic element of optimism helps people cope and adjust positively, take positive prospective thinking, and persist in socially valued behaviour during challenging times (Peterson & Seligman, 2004, Geers et al., 2009). This positive influence of optimism on coping is therefore a possible route through which optimism can help people resist the temptation to engage in corruption. An apparent implication of this is that policies and interventions that increase

citizens' optimism about their lives within the country are likely to impact negatively on citizens' intention to commit corrupt acts.

However, because the current study is more of a forerunner, several important issues remain unknown. One of these unknown issues is the boundary conditions around the relationship between optimism and inclination to engage in corruption. Although we were able to examine whether optimism interacts with gratitude, age and gender to influence inclination to be corrupt, several other possible moderating and mediating paths remain to be explored. An important factor in this regard is culture. Although scholars seem to agree that optimism is a universal disposition (see Gallagher et al., 2013), there are indications that its pattern and degree of variation and how it influences other behaviours are dependent on culture (Fischer & Chalmers, 2008; Khallad, 2013). Unfortunately, there are conflicting findings in this regard. For instance, whereas Fischer and Chalmers (2008) found that optimism seem to be stronger among egalitarian and individualistic populations, Baranski et al. (2021) found higher levels of optimism among underdeveloped and collectivist countries, such as Nigeria. A more twisting and puzzling scenario arises when Baranski et al. (2021) finding is put side by side with the findings that values that underpin collectivism, such as uncertainty avoidance and power distance, are positively related to corruption (see Li et al., 2006; Pillay & Dorasamy, 2010; Scholl & Schermuly, 2020; Yeganeh, 2014). These findings throw-up several cogent questions. How do these variables – optimism, uncertainty avoidance, and power distance – interact to influence corruption? For instance, will optimism remain a significant antagonist of inclination to be corrupt when uncertainty avoidance and power distance are added to the equation? The implication of this scenario is that we need more studies that take other cultural variables, which are equally related to corruption, into consideration in order to decipher the actual role of optimism in corrupt behaviours among countries like Nigeria. Other related questions revolve around the relationship between optimism and other dispositions that are equally associated with culture. Prominent amongst these dispositions is prosocial behaviour. As we earlier highlighted, studies show that optimism is positively associated with prosocial behaviours (Maki et al., 2016) and, on the other hand, prosocial behaviour has been shown to undermine corrupt behaviours, such as cheating (Rahwan et al., 2018). There are equally indications that optimism is positively associated with self-control (Oriol et al., 2020) and self-control has been shown to play some significant roles in antisocial behaviours (Tehrani & Yamini, 2020). The foregoing highlights underscore the need to hold the current finding as a vista to future studies. It shows that a better understanding of the relationship between optimism and corrupt behaviour is tied to our knowledge of how the relationship stands in the midst of other relevant variables.

Another important question that pops up in the face of the current finding is whether optimism can exert similar negative influence on actual corruption. Although this question remains to be directly tested, there are indications that predictors of intention can

predict actual behaviour. Insights can be drawn from the application of the theories of reasoned and planned behaviour (Ajzen, 1985, 1991; Fishbein & Ajzen, 1975). Although the idea that intention does not equal behaviour is not arguable because the manifestation of intention is often dependent on other intervening factors, studies continue show that intentions are strong predictors of actual behaviours (see Gardner et al., 2020; Hassan et al., 2014). For instance, Huang and Chen (2023) recently examined the criminal intention-criminal behaviour (injury to others, theft, and drug use) link in Taiwan, anchoring on the TRA and TPB. The authors found that irrespective of the conditioning effect of subjective norm, attitudes toward crime, and perceived behavioural control, criminal intention exhibited significant direct influence on the occurrences and frequencies of crime – injury to others, theft, and drug use. The idea we advance here is that optimism is likely to predict actual corrupt behaviour since it predicts intention to engage in corruption. However, future exploration of this possibility has the potentials to deepen our understanding of the relationship between the character strength of optimism and corruption, generally.

Another interesting finding of the current study is how age moderated the relationship between optimism and inclination to be corrupt. In addition to its direct negative impact on the tendency to be corrupt, optimism interacted with age to influence variation in the tendency to be corrupt. Optimism was more likely to hinder inclination to engage in corruption among the older participants than among younger participants. This result partly explains the often reported age differences in corrupt behaviours. For instance, studies show that older adults are often less likely to justify or permit corruption (see Denisova-Schmidt et al., 2016; Han, 2023; Lavena, 2013; Torgler & Valev, 2006). When considered in the light of the current finding, showing that older participants were more optimistic than their younger counterparts (see Table 1), which is consistent with previous findings (e.g., You et al., 2009; Scheier & Carver, 2018), the interaction effect can be interpreted to mean that older participants are less likely to engage in corruption because they are more optimistic about life than their younger counterparts.

However, the universality of this assumption remains unknown because, as earlier observed, the current study population presents some unique characteristics that might have influenced the outcome of the current study in yet unknown ways. For instance, the age differences in optimism among the current study participants might have been influenced by the changes in the nation's socio-economic progress. The current economic and social conditions in the country are worse now. The implication is that the older participants are likely to have experienced times of prosperity, whereas the younger ones are only confronted with the current hard times. The positive memories of the past might have increased the older participants' positive view about the future. On the other hand, the younger ones who never experienced such good times probably have no positive experiences to employ in their evaluation of the future. In support of this line of thought, several findings show that positive experiences enhance optimistic dispositions over time (see

Li et al., 2019; Scheier & Carver, 2018).

Another possible explanation concerns the possibility that people acquire more coping strategies as they grow older, a condition that can lead to an enhanced belief in one's ability to successfully navigate and confront future challenges. Whitty (2003) found that both middle aged and older participants employed more matured defence mechanism than the younger participants. Similarly, de Minzi and Sacchi (2005) demonstrated that "the middle age group showed a way of coping aimed at solving the problem, while there seemed to be a tendency among the young group to try to elude problems" (pp. 405). The idea being advanced here is that the changes in the socio-economic progress of Nigeria have the potential to explain the interaction effect. Thus, future studies are likely to broaden and deepen our knowledge of the conditions around this interaction effect by assessing the possible influences of the indicators of such socio-economic changes.

Unlike optimism, the regression analysis returned insignificant direct effect of gratitude on the tendency to be corrupt. This is contrary to the hypothesis that gratitude is potentially equipped to significantly undermine corrupt inclinations, a hunch that was inspired by the theoretical description of gratitude and findings of relevant studies. However, some ideas in the literature can be leveraged to explain the current result. The most prominent among these ideas is the concept of reciprocity associated with gratitude. It is being argued that the desire to give back to good gestures might make it difficult for people with substantial levels of gratitude to resist corrupt behaviour (see Batory, 2012; Di Zheng et al., 2021; Ignatowski, 2017; Stepurko et al., 2013; Wood et al., 2016). In fact, Wood et al. (2016) identified reciprocity as the possible dark side of gratitude. Stepurko et al. (2013) have argued that reciprocity is partly responsible for the corruption in the health system in Central and Eastern Europe. They identified what they called "gratitude payment" as one of the major sources of corruption in the region. This perspective may explain the current finding, especially among the current study population.

As we observed earlier, Nigeria is one of the highest-ranking corrupt nations on earth. Her institutions, systems, and operations, including the health system, are replete with corrupt practices such as bribery, favouritism, and other unethical practices (see Agbibo, 2010, 2014; Onwujekwe et al. 2020). The implication of this type of situation is the existence of a wide network of people who might have in one way or the other benefited from corrupt practices or from corrupt individuals. This would imply that the country is faced with a wide range of network of people, groups, and organizations that are, in one way or the other, owing gratitude to a corrupt system or corrupt individuals. Under this kind of burden, people are less likely to condemn, or even extricate themselves from, corrupt behaviours not necessarily because they might have directly participated in corrupt activities but because they have benefited from corrupt processes or proceeds. The point being made here is that even if people with a high level of gratitude do not ordinarily have the motivation to engage in corruption, the burden of

reciprocity they carry may work against their tendency to fight or prevent corruption from happening, especially in a country like Nigeria in which corruption is rife. Thus, instead of concluding that gratitude does not have direct influence on intentions to engage in corruption, future studies might focus on unravelling conditions under which the burden of gratitude is likely to work in favour or against corrupt intentions.

Another result that is worth highlighting is the finding that males were more likely to engage in corruption than the females. This result is consistent with the literature. Studies consistently show that females are less likely to engage in corruption than their male counterparts (see Barnes & Beaulieu, 2018; Bauhr & Charron, 2020; Guerra & Zhuravleva, 2022). Several reasons have been adduced to explain this effect. There are some scholars who argue that the egalitarian feminine qualities, which are obviously more pronounced among females, are responsible for the gender gap. For instance, females have been shown to exhibit more prosocial behaviours than the males, a quality that has equally been shown to undermine antisocial behaviours (Eagly & Crowley, 1986). It has also been argued that females are more averse to risk; hence, are less likely to take the risks involved in corrupt behaviours (Esarey & Schwindt-Bayer, 2018).

Others contend that the differences in the social expectation placed on the different genders play some roles in the gender gap. It is argued that females, generally, are socially expected to avoid crime, a situation that explains the stiff reactions and biased stigmatization that often trail apprehension of a female offender (Barnes & Beaulieu, 2018). Bauhr and Charron (2020) attributed the gender gap to the differences in how males and females perceive corruption. Evidence show that females are often likely to perceive and condemn corruption (Bauhr & Charron, 2020). Although condemnation may not necessarily translate to abstinence, it is often assumed that people are less likely to engage in what they condemn or do not approve.

Although the foregoing perspectives appear to have lines of support in the literature (see Barnes & Beaulieu, 2018; Bauhr & Charron, 2020; Esarey & Schwindt-Bayer, 2018; Guerra & Zhuravleva, 2022; Wängnerud, 2012), Stensöta & Wängnerud (2018) have argued that the potency of each of the perspectives depends on the prevailing social, cultural and institutional settings within a culture. Unfortunately, we failed to find any study that explored any of the perspectives among the current study population. Most of the available studies were conducted in developed nations or what Baranski et al. (2023) referred to as Western, Educated, Industrial, Rich, and Democratic (W.E.I.R.D) nations. Therefore, in view of the cultural differences and considerable gap in gender equality between the W.E.I.R.D nations and underdeveloped nations, such as Nigeria, there is need to exercise caution in adopting any of the perspectives to explain the current finding.

In countries like Nigeria, the evolutionarily evolved traditional division of labour remains very strong. Males are still

largely considered breadwinners of the family and females are seen as house and children keepers. The inability of any man to fulfil his role as the breadwinner of the family attracts serious social stigmatization that can lead to the labelling of the man as an “irresponsible man”. Unfortunately, the current economic hardship in the country obviously makes it very difficult for an average man to satisfy the needs of his family. One implication of this situation is that males may be inclined to take any available route to achieve the socially and culturally assigned role and avoid social shaming. The hunch we advance here is that, in addition to the idea that feminine qualities are potent moderators of the gender differences in corruption, the need to fulfil culturally and socially expected roles by men in economically deprived populations, such as Nigeria, has the potential to explain why men are more likely to engage in corruption.

Implications for research and practice

The present study, in line with other emerging studies, clearly shows that positive psychology can go beyond helping us to understand how to improve human well-being. It has the potentials to also help us understand and confront some of the challenging social problems facing the world, such as criminal actions, attitudes, and dispositions. It has therefore become important for research to intensify the interrogation of the roles of these positive psychological strengths and characters in criminal intentions and behaviours. Findings will obviously help both practitioners and policy makers in fashioning strategies aimed at curbing the socially undesirable behaviours. We were able to show that optimism helps to weaken the tendency to be corrupt both directly and indirectly. This should be considered a new vista of knowledge in this area. Important questions about the boundary conditions around the result need now to be asked and investigated. For instance, is this finding a universal phenomenon? Are there cultural peculiarities around the phenomenon? Also, the failure of gratitude to exert a significant direct effect on the tendency to be corrupt calls for more studies. For instance, in view of the suggestions that reciprocity, which is a core element of gratitude, weakens the fight against corruption (Stepurko et al., 2013), future studies may explore whether the burden of reciprocity plays any role in the link between gratitude and corruption. In addition to the theoretical and research implications, the current findings hold some practical implications, especially for policy makers and professionals involved in combating corruption. Part of the problem associated with fighting corruption in a country like Nigeria where corruption has become endemic is the loss of hope and trust in government institutions, a situation that boosts sense of pessimism, paranoia, cynicism, and fear (Pelletier & Bligh, 2008; Rothstein, 2013), which are conditions that been shown to potentiate corrupt behaviours (Bosman et al. 2005; Van den Broeck et al., 2014).

Therefore, implementation of strategies and policies that create optimistic atmosphere can help reverse these conditions and delay citizen's quest to engage in corrupt practices. This can be

achieved by deliberately designing anti-corruption communications that increases citizen's positive view of the future. In the case of Nigeria, for instance, consistent provision of information that showcases a brighter future for the country's economy and development can help elevate citizens' optimism by creating a mental state in which they see opportunities through which they can achieve their goals within the nation, a condition that has the capacity to make them depend less on corruption for survival.

Limitations of the study and suggestions for further studies

The limitations of the current study revolve largely around the demographic nature of the respondents. First, majority of the participants were from the Igbo-speaking people of Nigeria. This can lead one to question the replicability of the current findings among other ethnic groups. However, the possibility that the findings can be replicated across the ethnic groups is underscored by the fact that most of the ethnic groups practice similar communalistic culture. The second limitation revolves around the age range of the respondents (16-35 years), which did not include older adults. Most of the respondents were also single and from the same religious group (Christianity). Although we cannot say that these demographic characteristics impacted the current findings, future studies need to take these observations into consideration. Validation of findings across different demographic groups increases the confidence in findings and in the usage of such findings to inform policymaking.

Another critical limitation of the current study is the possibility that social desirability responding (SDR) might have influenced participants' responses. Given the fact that people will always want to present themselves in a positive light, asking people questions about their likelihood to engage in corruption can be influenced by SDR. Thus, future studies may also need to assess SDR and tease out its influence on the tendency to be corrupt before estimating the influence of other factors.

Declarations

Competing interest: The authors declare no competing interests.

Data availability: The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Ethical statement: Approval for the current study was obtained from the University Research Ethics Committee and all procedures performed were in accordance with the ethical standards of the University Research Ethics Committee and with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

Informed consent: In accordance with the regulations guiding research involving human participants in the University where the study was conducted, respondents signed informed consent forms before completing the questionnaires.

Author contributions: The authors contributed equally to this work.

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