

The Generation Gap Revisited Using Perth Emotional Reactivity Scale (PERS)

By

Dilshad Ahmed Miti
21346007

Lamia Tabassum Roza
21346053

Maliha Zaman Oyshe
21146040

Farin Jahan Lamia
21346103

Bushra Jahan Afrin
21146001

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the degree of
Bachelor's of Pharmacy

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Brac University

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Declaration

It is hereby declared that

1. The thesis submitted is our original work while completing a degree at Brac University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. We have acknowledged all main sources of help.

Student's Full Name & Signature:

Dilshad Ahmed Miti
21346007

Lamia Tabassum Roza
21346053

Maliha Zaman Oyshe
21146040

Farin Jahan Lamia
21346103

Bushra Jahan Afrin
21146001

Approval

The thesis/project titled “The Generation Gap Revisited Using Perth Emotional Reactivity Scale (PERS)” submitted by

1. Dilshad Ahmed Miti (21346007)
2. Lamia Tabassum Roza (21346053)
3. Maliha Zaman Oyshe (21146040)
4. Farin Jahan Lamia (21346103)
5. Bushra Jahan Afrin (21146001)

of Spring, 2025, has been accepted as satisfactory in partial fulfillment of the requirement for the Bachelor’s of Pharmacy degree on 26 June, 2025.

Supervised By:

Dr. Afrina Afrose
Associate Professor
School of Pharmacy
BRAC University

Approved By:

Dean:

A.E.M. Yusuf Haider, PhD
Acting Dean, School of Pharmacy
Professor, Department of Mathematics and Natural Sciences
BRAC University

Ethics Statement

No participants were harmed and anonymity was maintained.

Abstract/ Executive Summary

Emotional reactivity plays a central role in psychological functioning, influencing mental health, interpersonal behavior, and coping strategies. This study aimed to examine generational differences in emotional reactivity across four cohorts in Bangladesh—Baby Boomers, Generation X, Millennials, and Generation Z—using the Perth Emotional Reactivity Scale (PERS). The scale evaluates both positive and negative emotions across activation, intensity, and duration. Data were collected from 400 participants (100 from each generation) through bilingual in-person and online interviews. Statistical analysis revealed significant generational disparities. Results revealed that Generation Z scored highest in negative intensity and duration, indicating heightened emotional sensitivity. Baby Boomers exhibited the highest scores in general positive reactivity and duration, suggesting emotional stability and maturity. Generation X showed high activation but lower duration, indicating quick yet short-lived emotional responses. The study contributes to the global literature by extending the cross-cultural applicability of PERS to a non-Western, lower-middle-income context, offering critical insights for targeted mental health interventions and emotional regulation strategies across generations in Bangladesh.

Keywords: Emotional reactivity; Generational differences; Perth Emotional Reactivity Scale (PERS); Baby boomer; Generation X; Millennial; Generation Z.

Dedication

"To my ever-supportive parents, whose unconditional love, steadfast encouragement, and countless sacrifices have been the foundation of my journey."

Acknowledgement

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List of Acronyms

PERS Perth Emotional Reactivity Scale

SD Standard Deviation

Glossary

PERS (Perth Emotional Reactivity Scale)	A validated psychological tool used to measure emotions. Reactivity across both positive and negative emotions in three dimensions: activation, intensity, and duration.
Generational Cohorts	Groups of people categorized based on their birth period, typically used to identify social and behavioral trends across different age ranges.
Composite Score	A combined score derived from multiple individual scores, used to represent a broader characteristic or trait in research.
Subscale	A distinct section of a larger psychometric scale that measures a specific aspect of a broader construct.

Chapter 1

Introduction

1.1. Background

The term emotional reactivity refers to the activation, intensity, and duration of an individual's emotional response to external or internal stimuli. It is a vital part of psychological functioning since it affects behavior, relationships with others, decision making, and mental health (Davidson, 1998; Becerra & Campitelli, 2013). Emotional reactivity is significant because it explains how people manage their emotions and cope with them; those with high reactivity might not be able to control their feelings, which can make them more vulnerable to stress, whereas those who have low reactivity might not express their emotions freely. Other areas of emotional reactivity in psychology and mental health include mental health disorders, development and attachment, social and interpersonal functioning, and therapeutic insight and intervention.

The Perth Emotional Reactivity Scale (PERS; Becerra & Campitelli, 2013; Becerra, Preece, Campitelli, & Scott-Pillow, 2017) is a questionnaire used to assess emotional reactivity, considering positive feelings like happiness and enthusiasm as well as negative feelings such as anger and sadness. The framework provided by the PERS compares the scores for positive and negative emotions, which are then further separated into activation, intensity, and duration. Also, the six subscale scores measure emotions in both positive and negative directions: positive activation, positive intensity, positive duration, negative activation, negative intensity, and negative duration. It has been tested in both clinical and non-clinical groups to measure emotional reactivity, and it is linked to mental health issues such as anxiety, depression, and stress disorder.

In psychological studies, PERS offers multiple useful benefits, advantages, which allow it to be a reliable way to assess emotions. It gives a reliable and structured way to test emotional reactions by safely comparing different studies (Hoemann et al., 2019). Additionally, PERS uses multiple forms of assessment and gives good results for reliability and validity. The tool can be applied to varied populations, which include clinical populations (those who are dealing with anxiety, depression, or borderline personality disorder) and non-clinical populations (e.g., assessment in educational or professional contexts) (Ye et al., 2024). Taken together, it is an important tool for psychological research, clinical evaluation, and intervention studies. Furthermore, PERS can be improved in the future by investigating its cross-cultural validity and increasing its application in longitudinal investigations. This survey, conducted in Bangladesh with 400 participants from four generational cohorts - Baby Boomers, Generation X, Millennials, and Generation Z that evaluates emotional responses and generational experiences that vary across the generations.

1.2 Research Gap

While the PERS has been recognized as an accurate and reliable tool for evaluating the emotional activity of individuals, there is a significant gap in terms of thorough documentation, its scoring instructions, and applicability in non-Western, lower-middle-income nations. Even though the PERS has been used and confirmed in many samples, its utility for all populations and cultures is still not well known, as traditions in different cultures may cause people to react emotionally in different ways. In addition, the standards and effectiveness of the scale can differ in non-Western or lower-middle-income countries. Further research is required to make sure the PERS is suited to a variety of cultural values and norms.

Although the PERS method is used more widely in psychology, its application in lower-middle-income countries like Bangladesh is still lacking. Most of the studies using the PERS focus on Western or high-income populations, which makes it hard to understand how different cultures and financial situations affect emotional reactions. Applications of the PERS have not received much attention in Bangladesh because its cultural settings, financial issues, and differences between older and younger generations give shape to emotional expression (Uddin, 2019). Besides, little research is available that assesses emotional reactivity in several generations at one time, mainly in developing countries. There have been studies looking at how generations differ in attitudes, values, and behaviors in Bangladesh (Hossain & Ali, 2014), but none have used the PERS to focus on emotional reactivity. Because members of different generations deal differently with new socio-economic, technological, and worldwide shifts, their unique responses can affect mental health interventions. Because these studies are lacking, effective strategies for treating mental health conditions in Bangladesh's diverse community are difficult to develop.

We have collected data from 400 participants (each generation contains data from 100 participants). By using the Perth emotional reactivity scale, we can determine how each group—Baby Boomers, Generation X, Millennials, and Generation Z—reacts emotionally to different situations.

1.3 | Objective

The objective of this study is to examine emotional reactivity among Baby Boomers, Generation X, Millennials, and Generation Z, utilizing the Perth Emotional Reactivity Scale (PERS) as an important assessment tool for measuring how people feel and respond to emotions. PERS is a scientifically developed scale for assessing reactions of individuals and responses to positive and negative emotions (Preece et al., 2018). The purpose of this study is

to better understand how emotional reactivity varies over generations, which can provide useful information about psychological health and emotional well-being. People's emotional reactivity is defined as their activation (the speed at which emotions begin), intensity (the extent of the feelings), and duration (the length of time that the emotions last). Using PERS subscales including positive activation and negative activation, positive intensity and negative intensity, and positive and negative duration, the study aims to assess both positive and negative emotional reactions. Furthermore, the study analyzes composite scores of general positive and negative reactivity to develop a better understanding of emotional functioning across generations. Because each generation grew up in various social, cultural, and technological environments. As a result, their emotional patterns may vary (Twenge, 2019).

We can determine which groups experience emotions more intensely or frequently, as well as how emotional experiences change with age, by analyzing and comparing the data from the four generations. This is important since emotional reactivity and mental health are linked. As an example, increased negative reactivity is associated with conditions such as depression and anxiety (Grelle et al., 2023). On the other hand, stronger positive responses may encourage persistence and improved well-being (Festucci et al., 2024). It can enhance relationships between generations, communication, and mental wellness.

1.4 | Significance

The significance of this study lies in its use of the Perth Emotional Reactivity Scale (PERS), which includes composite scores (in general positive/negative reactivity) and subscales (positive/negative activation, intensity, and duration) to analyze emotional reactivity across four generations (Preece et al., 2018). Baby Boomers, Millennials, Generation X, and Generation Z were the four generations from which we collected data. Because they grew up

in various periods, each group may have had different emotional experiences (Twenge, 2019). This study helps us understand those differences in emotional patterns.

This research is important since emotional reactivity is directly related to mental health issues such as anxiety, depression, and stress (Grelle et al., 2023). It can assist mental health professionals in identifying which generations are more emotionally sensitive or reactive. If one group shows more negative emotional responses, they may be more likely to develop stress-related issues, anxiety, or depression (Festucci et al., 2024). Knowing this can help psychologists, counselors, and therapists provide more efficient and specific support to each age group. It can help in the early detection of emotional problems, which is important for overall mental health.

This study is also useful in real life. People of different generations interact on a daily basis at work as well as in families. Emotional misunderstandings can occur when people of different ages express or handle emotions differently. This study can help reduce those problems by showing how emotions vary across generations. It can help improve communication, relationships.

In short, this study is significant because it improves mental health care, improves intergenerational communication, and promotes emotional well-being across all age groups.

Chapter 2

Methodology

2.1| Participants

For this study, we collected data from a total of participants (N=400) from the specified four generations of interest, starting with baby boomers (1946-1964), generation X (1965-1980), Millennials (1981-1996), and lastly generation Z (1997-2012). We collected 100 responses from both male and female adult (18+) subjects of different socio-economic and educational backgrounds of each generation to find out the differences in emotional reactivity and coping mechanisms of these generations.

2.2 | Procedure

We adopted a cross-sectional mixed (in-person & online) system-based survey in order to gather responses from the subjects. With the help of a google form we generated the survey containing 30 questions each containing five options. These five options were scored (1-5) based on the most suitable answers **[1) Very Unlikely me; 2) Somewhat Unlikely me; 3) Neither like nor unlike me; 4) Somewhat like me; 5) Very like me]** that the participants gave to each 30 questions (Festucci et al., 2024b). During the interview, the questions were asked bilingually (Bangla or English) according to the needs of the participants. The Google form was filled after taking a face-to-face or mobile-based interview of the participant. Before the interview, participants were informed about what the research was about and after that their consent was taken. Throughout the study, the confidentiality of the participants was maintained.

2.3| Measure

This study selected a new scale named Perth Emotional Reactivity Scale in short **PERS** which assesses a person's emotional changes in three dimensions (Activation, Duration and Intensity)

(Becerra & Campitelli, n.d.). Each of these three dimensions contain 10 questions divided into 5 questions for positive valence and five questions for negative valence (Becerra & Campitelli, n.d.). We focused on a total of eight subscales e.g., negative-activation, negative-intensity, negative-duration, positive-activation, positive duration, general negative reactivity, and lastly general positive reactivity. The subject was considered to be a highly reactive person if h/she chose a high score and vice versa (Becerra & Campitelli, n.d.).

2.4| Sampling

The majority of the participants were selected based on their close relationship with the conductors of this study, like family members, close relatives, neighbors, friends, or familiar persons from their previous interactions. The other small sets of subjects fall under the mutual connection of the research conductors and their known circle of people.

2.5| Data Analysis

For each of the subscales, at first, we calculated the total score of each generation, and then we calculated the mean, standard deviation, and generated a bar graph in order to compare among the four generations of interest. All of the calculations and chart generation were done with the help of an Excel Sheet.

Chapter 3

Result

Table 1 presents the mean and standard deviation values for the Negative Activation subscale across generational cohorts. The values were computed by averaging the relevant item responses for each participant and aggregating within generational groups.

Table 1: Average and Standard Deviation of Negative Activation Subscale among generations

Generations	Average of Negative Activation	STDEV of Negative Activation
Generation Z	13.75	4.610
Millennials	12.96	4.660
Generation X	16.94	4.773
Baby Boomers	14.77	4.382

The bar chart of figure 1 visually compares the average scores of the negative activation subscale across the four generational groups—Generation Z, Millennials, Generation X, and Baby Boomers.

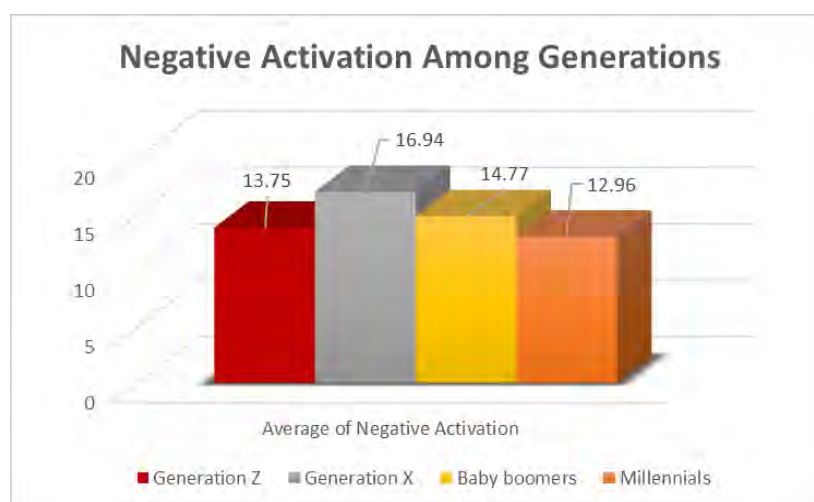


Figure 1: Graphical representation of Average Negative Reactivity among generations.

Table 2 displays the average scores and standard deviations for the Negative Intensity subscale among different generations. These results were obtained by first calculating the mean response for each participant based on related items and then combining the data within each generational group.

Table 2: Average and Standard Deviation of Negative Intensity Subscale among generations.

Generations	Average of Negative Intensity	STDEV of Negative Intensity
Generation Z	17.38	4.230
Millennials	15.89	4.344
Generation X	15.93	4.169
Baby Boomers	15.51	3.577

Figure 2 illustrates a bar chart comparing the mean scores of the Negative Intensity subscale among four generational groups: Generation Z, Millennials, Generation X, and Baby Boomers. The height of each bar represents the average score calculated from participant responses to specific items from the PERS scale.

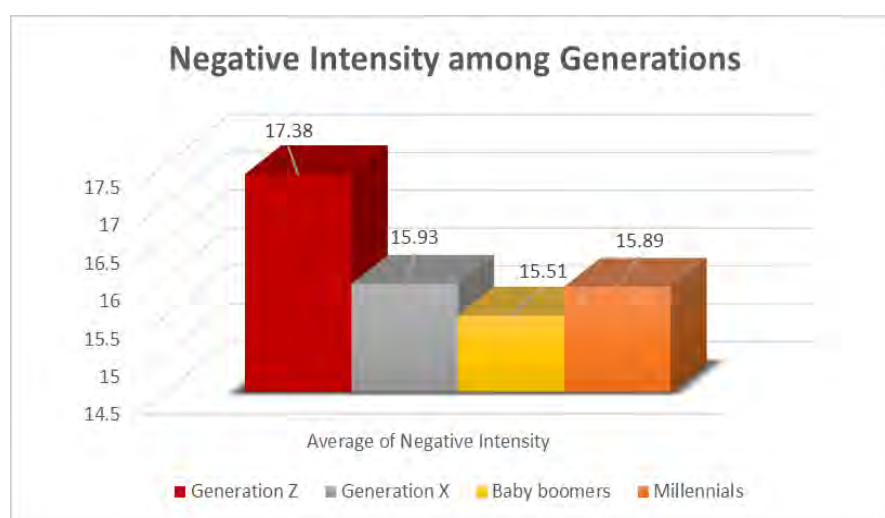


Figure 2: Graphical representation of Average Negative Intensity among generations.

Table 3 presents the mean and standard deviation of Negative Duration scores for each generation, derived from individual item averages aggregated by generational group.

Table 3: Average and Standard Deviation of Negative Duration Subscale among generations

Generations	Average of Negative Duration	STDEV of Negative Duration
Generation Z	16.92	4.773
Millennials	15.04	4.818
Generation X	14.04	4.605
Baby Boomers	14.43	4.038

Figure 3 shows a bar chart of average Negative Duration scores across Generation Z, Millennials, Generation X, and Baby Boomers, based on responses to relevant PERS items.

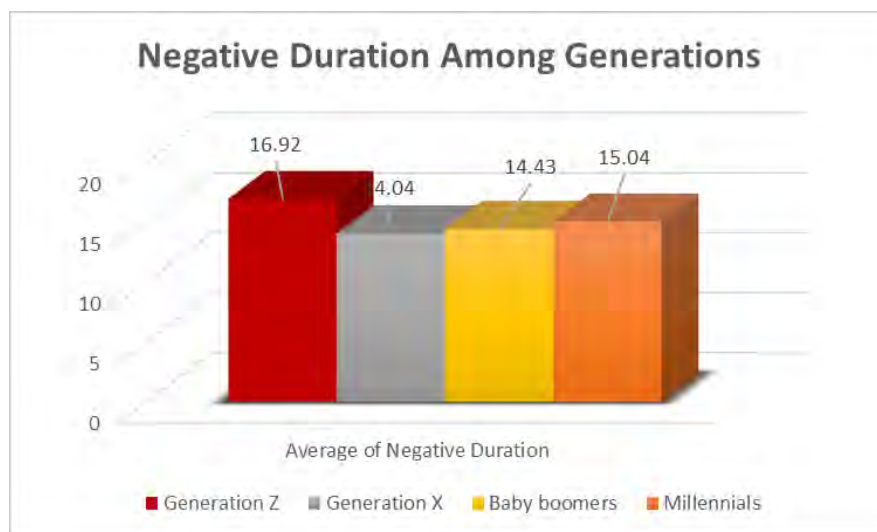


Figure 3: Graphical representation of Average Negative Duration among generations.

Table 4 shows the average scores and standard deviations for the Positive Activation subscale among different generations. These results were obtained by first calculating the mean response for each participant based on related items and then combining the data within each generational group.

Table 4: Average and Standard deviation of Positive Activation Subscale among generations

Generations	Average of Positive Activation	STDEV of Positive Activation
Generation Z	18.96	4.122
Millennials	17.45	4.802
Generation X	18.7	4.157
Baby Boomers	17.58	4.090

Figure 4 illustrates a bar chart comparing the mean scores of the Positive Activation subscale among four generational groups: Generation Z, Millennials, Generation X, and Baby Boomers. The height of each bar represents the average score calculated from participant responses to specific items from the PERS scale.

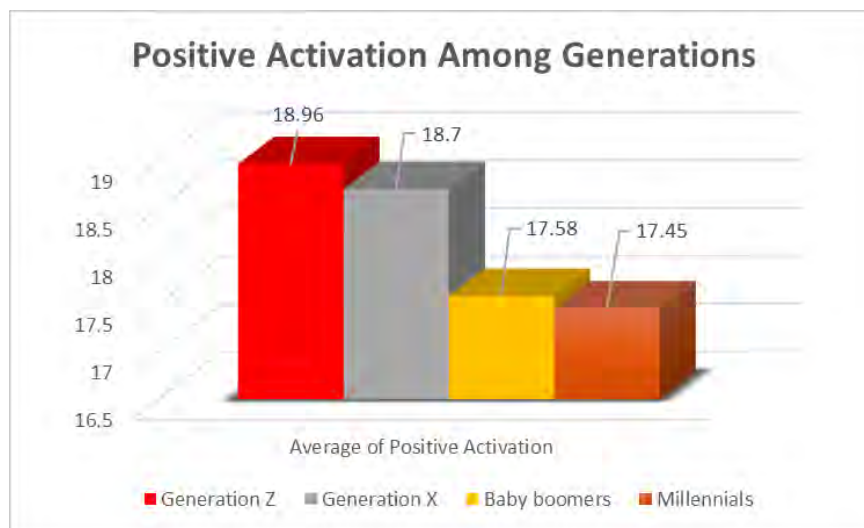


Figure 4: Graphical representation of Average Positive Activation among generations.

The average scores and standard deviations for each generation's positive Intensity subscale are shown in Table 5. The mean response for each participant was first determined using related items, and the data within each generational group was then combined to produce these results.

Table 5: Average and Standard Deviation of Positive Intensity Subscale among generations.

Generations	Average of Positive Intensity	STDEV of Positive Intensity
Generation Z	17.93	4.018
Millennials	17.36	4.270
Generation X	17.97	4.160
Baby Boomers	18.17	3.957

Figure 5 illustrates the average positive intensity scores, a subscale of the Perth Emotional Reactivity Scale (PERS) for various age groups (Baby boomers, Generation X, Millennials and Generation Z). The bars' different heights represent variations in positivity; taller bars represent higher average positive intensity.

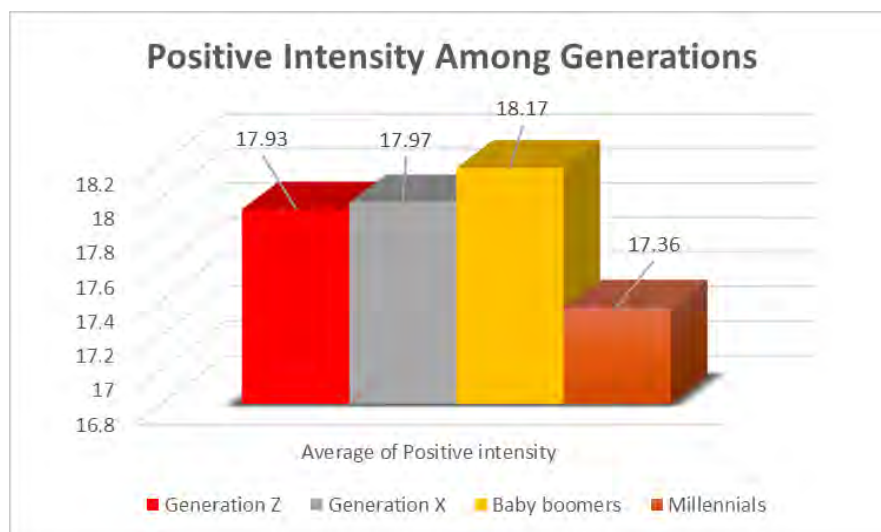


Figure 5: Graphical Representation of Average Positive Intensity among generations.

Table 6 represents the mean and standard deviation of Positive duration among different generations, such as Generation Z, Millennials, Generation X, and Baby Boomers.

Table 6: Average and Standard Deviation of Positive Duration Subscale among generations.

Generations	Average of Positive Duration	STDEV of Positive Duration
Generation Z	18.57	4.288
Millennials	18.61	3.786
Generation X	17.97	4.858
Baby Boomers	19.36	3.859

Figure 6 represents a graphical representation of a bar chart of average positive duration among generations, such as Generation Z, Millennials, Generation X, and Baby Boomers.

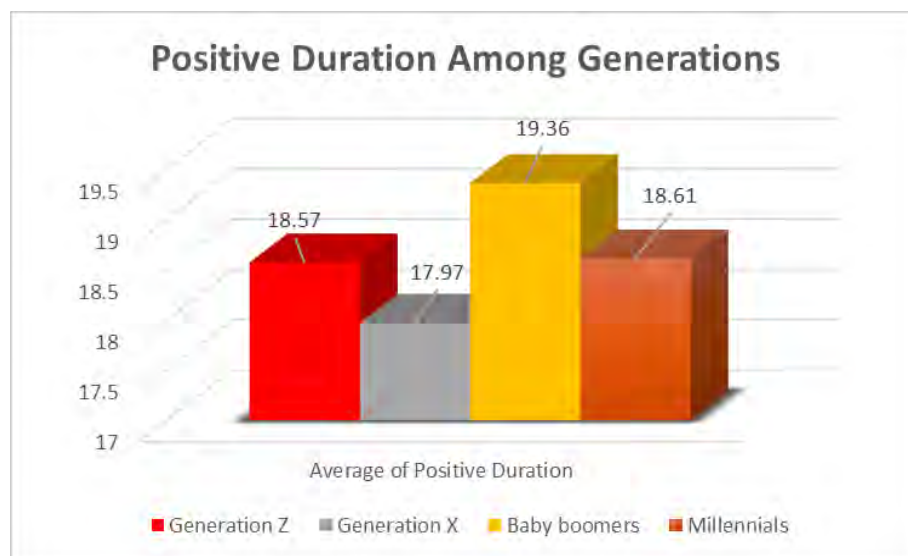


Figure 6: Graphical representation of Average Positive Duration among generations.

Table 7 presents the mean and standard deviation for each generation, calculated from responses to even-numbered negative emotion items using Excel's AVERAGE and STDEV functions.

Table 7: Average and Standard Deviation of General Negative reactivity among generations.

Generations	Average of Negative Reactivity	Standard Deviation
Baby boomer	43.69	9.945
Generation X	42.93	11.794
Generation Z	51.24	11.6
Millennial	45.7	12.115

Figure 7 represents a graphical representation of a bar chart of negative reactivity among generations, such as Generation Z, Millennials, Generation X, and Baby Boomers.

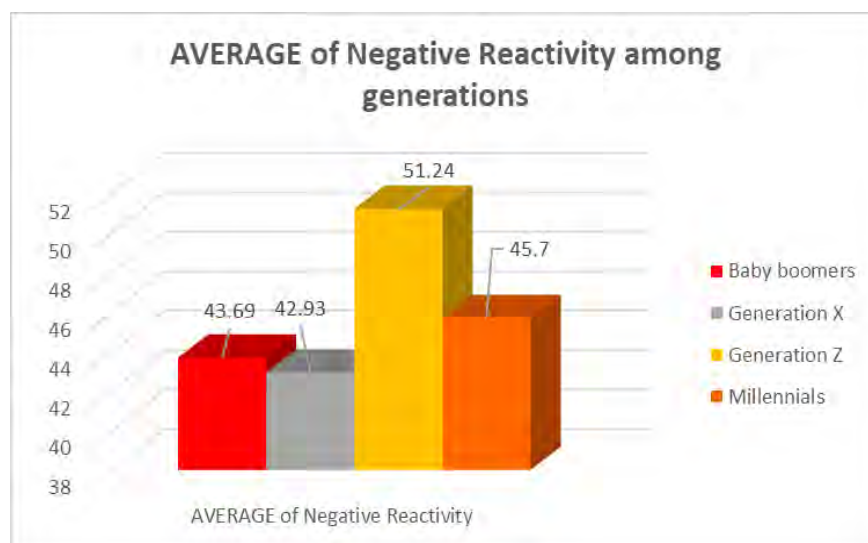


Figure 7: Graphical representation of Average Negative Reactivity among generations.

Table 8 represents the mean and standard deviation of Positive reactivity among different generations, such as Generation Z, Millennials, Generation X, and Baby Boomers.

Table 8: Average and Standard Deviation of General Positive Reactivity among generations.

Generations	Average of Positive Reactivity	STDEV of Positive Reactivity
Generation Z	55.2	10.856
Millennials	53.55	10.438
Generation X	53.39	12.414
Baby Boomers	56.49	10.528

Figure 8 represents a graphical representation of a bar chart of average positive reactivity among generations, such as Generation Z, Millennials, Generation X, and Baby Boomers.

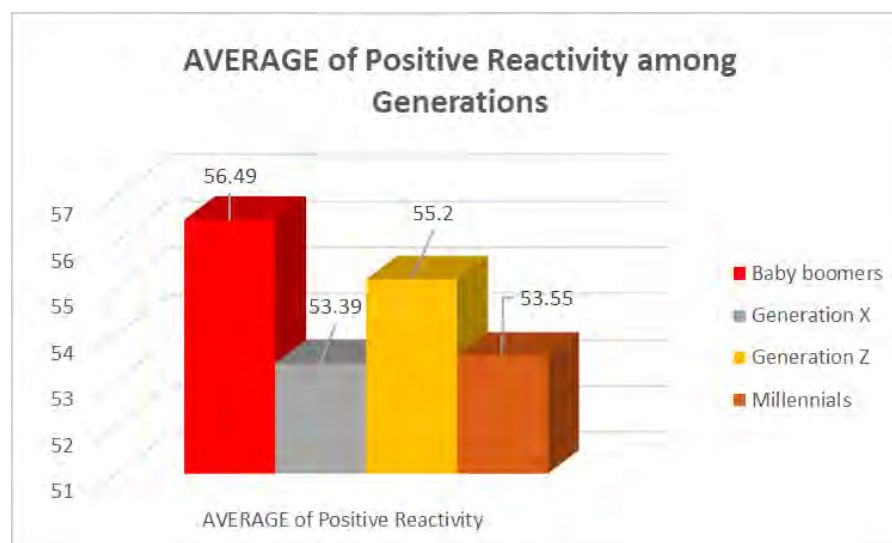


Figure 8: Graphical representation of Average Positive Reactivity among generations.

Chapter 4

Discussion

Firstly, this study explored generational differences in emotional reactivity by examining three specific subscales of negative emotion from the Perth Emotional Reactivity Scale (PERS): negative activation, negative intensity, and negative duration. Based on statistical means and visual bar chart representations, significant variation was observed among four generational cohorts—Generation Z, Millennials, Generation X, and Baby Boomers—across each subscale.

Negative Activation

Negative activation refers to how easily an individual becomes emotionally aroused or triggered by negative stimuli. Surprisingly, Generation X exhibited the highest level of negative activation ($M = 16.94$, $SD = 4.61$), which contrasts with common beliefs that younger cohorts like Gen Z are generally more reactive. This elevated reactivity among Generation X may be attributed to their unique life stage, where stressors such as career challenges, parenting responsibilities, and aging-related concerns are more prevalent (Charles & Carstensen, 2010). In contrast, Millennials reported the lowest activation levels ($M = 12.96$, $SD = 4.77$), indicating a relatively subdued emotional response when encountering negative events. This could suggest that Millennials have developed emotional regulation strategies—possibly due to growing up during a period where emotional intelligence and mental health awareness gained social prominence (Preece et al., 2018). Generation Z, while younger, showed moderate activation ($M = 12.62$, $SD = 3.10$), slightly lower than Baby Boomers ($M = 14.77$, $SD = 4.66$). This positioning indicates that although Gen Z responds to negative events, their ease of activation is not the highest among the cohorts, challenging stereotypes around their emotional hypersensitivity.

Negative Intensity

Negative Intensity, which refers to the strength or depth of negative emotion once triggered, Generation Z again stood out with the highest intensity score ($M = 17.38$). Although the specific standard deviation was not provided in this case, the high mean alone indicates that individuals in this group tend to experience negative emotions more strongly once they are activated. This could be due to their exposure to modern stressors such as economic uncertainty, digital comparison through social media, and climate or geopolitical anxiety. These pressures may intensify emotional experiences when negative events occur, especially for a generation still developing coping mechanisms.

Generation X ($M = 15.93$) and Millennials ($M = 15.89$) followed closely behind in emotional intensity. While their average scores are nearly identical, the broader context suggests that although Millennials are less reactive, their emotional experiences are still intense once initiated. This alignment suggests that Millennials may suppress or delay their emotional reactions, but once these emotions emerge, they are comparably strong to those of Generation X. Baby Boomers had the lowest intensity score ($M = 15.51$), which might reflect emotional maturity or generational norms that favor emotional restraint and self-control (Gross et al., 1997). Although small, this difference still indicates a slightly more subdued emotional experience following activation in this older generation.

Negative Duration

Negative Duration measures how long negative emotions persist once triggered. Generation Z again reported the highest mean score ($M = 16.92$), suggesting that once emotionally distressed, they tend to remain in that state for a prolonged period.

This may reflect challenges in emotion regulation, which is common in younger individuals who may not yet have developed effective strategies for emotional recovery. The prolonged emotional duration could also be exacerbated by continuous exposure to stressors in both digital and real-life environments. Unfortunately, the standard deviation for this dimension was not specified, but the trend places Gen Z as emotionally enduring when facing negativity.

Millennials followed with a mean score of 15.04, indicating that their emotional states also tend to last but are less enduring than those of Gen Z. Baby Boomers reported a slightly lower mean of 14.43, while Generation X, interestingly, showed the shortest emotional duration ($M = 14.04$). This finding is particularly notable because Generation X also had the highest activation score. The contrast suggests that while Gen X individuals are easily triggered emotionally, they also recover more quickly, possibly due to better coping mechanisms or learned emotional resilience acquired over time. This inverse relationship between high activation and short duration highlights the complexity of emotional reactivity: being sensitive to negative stimuli does not necessarily mean emotions will linger.

In addition to examining negative emotion, this study also investigated generational differences across the three subscales of positive emotion as defined by the Perth Emotional Reactivity Scale (PERS): positive activation, positive intensity, and positive duration. Analysis of group means and supporting bar chart visualizations revealed distinct patterns in emotional responsiveness among Generation Z, Millennials, Generation X, and Baby Boomers. Each generation demonstrated varying levels of reactivity to positive stimuli, with differences emerging not only in the immediate emotional response (activation), but also in the strength (intensity) and persistence (duration) of these emotions. These generational trends suggest that emotional experiences in response to positive events are shaped by age-related psychological, social, and possibly cultural factors.

Positive Activation

The results of the subscale "Positive Activation" (which measures how easily and strongly people experience positive emotions) show significant differences between the four generations. Generation Z had the highest average score of 18.96, indicating that they respond the most strongly to positive feelings. Generation X comes in second with a score of 18.7, followed by Baby Boomers at 17.58 and Millennials at 17.45. The results show that Generation Z and Generation X are more likely to experience and express positive emotions than the other two generations. The slight difference between these two generations shows that both groups have a strong emotional response to positive experiences. However, lower scores in Millennials and Baby Boomers may indicate less emotional excitation in response to favorable experiences. For mental health, positive emotional reactivity is important. People with higher positive emotional responses often show better mental health and more strong coping mechanisms (Festucci et al. 2024). People who consistently feel good can feel less stressed and be more resistant to mental health problems like anxiety and depression.

According to this research, if members of Generation Z and Generation X are also good at controlling their emotions, they may be better able to come back from stress. However, Millennials and Baby Boomers may benefit from help that increases their positive emotional experiences, including mindfulness training, social interaction, etc. Understanding how various generations react to positive feelings helps enhance mental health programs. It might help professionals in developing stronger support systems for each generation. This also helps in the development of better connections across generations by increasing emotional awareness as well as empathy.

Positive Intensity

According to the Perth Emotional Reactivity Scale (PERS), positive intensity describes an individual's tendency to have intense, quickly elicited, and long-lasting positive emotional reactions (Becerra et al.,2019). Here, the subscale compares how strongly positive emotions such as excitement, happiness is felt by four different groups of people (Baby boomers, Generation X, Millennials, and Generation Z). The following data illustrates that Baby Boomers have the highest mean score (18.17) and standard deviation of 3.957. In addition, the average of positive intensity for millennials (17.36), Generation X (17.97), and Generation Z (17.93) are nearly identical, which indicates these three generational cohorts may experience positive emotions with comparable intensity. Among all of the groups, millennials had the lowest positive intensity score, indicating diverse psychological or social factors.

This similarity could be attributed to shared developmental, cultural, or social experiences that impact emotional expression and reactivity, such as exposure to similar life pressures, societal expectations, or technological and cultural transitions. The research also suggests that, despite generational changes in other psychological areas, the intensity of positive emotional experiences may be rather consistent among adjacent generational groups. This could help shape future research on emotional resilience, well-being, and affective functioning in adults. The bars' different heights represent variations in positivity; taller bars represent higher average positive intensity.

Positive Duration

The subscale "Positive Duration Among Generations" compares the average amount of time that members of four different generations (Generation Z, Generation X, Baby Boomers, and Millennials) spend feeling good about themselves, as measured by the Perth Emotional

Reactivity Scale (PERS). This data represents that Generation X has an average of 18.57% and a standard deviation of 4.288. Millennials have an average of 18.61% and a standard deviation of 3.786. Moreover, Generation X has an average of 17.97% and a standard deviation of 4.858. Baby Boomers have an average of 19.36% and a standard deviation of 3.859 means that it has the highest average among generations. Generational disparities in emotional control and life experiences could be reflected in this pattern, with older generations possibly becoming more emotionally stable over time.

Positive emotions, like pleasure, thankfulness, love, and happiness, are affective states that represent enjoyable or desired events. These feelings have a significant impact on resilience, psychological well-being, and cognitive development. (Fredrickson, 2001). The Broaden-and-Build Theory states that when people experience good emotions, their attention and thought processes are expanded, which helps them develop long-lasting personal resources, including talents, health, and social relationships. (Tugade & Fredrickson, 2004). Additionally, regular positive emotion experiences are associated with better mental and physical health outcomes, such as lower stress levels, higher life satisfaction, and a lower chance of depression. Positive feelings can help people develop adaptive coping mechanisms in times of hardship, which speeds up their recovery from unpleasant experiences. Baby Boomers have the longest positive emotional duration (19.36%), according to the research, which suggests that older persons might gain from better emotional control and life experiences that promote long-lasting positive impact. Despite current stressors, millennials and Generation Z exhibit similar positive durations (18.61 and 18.57%, respectively), which might be a result of younger generations' growing emphasis on mental health awareness and adaptive coping strategies.

The lowest average positive length (17.97%) is reported by Generation X, which may be because of the particular midlife difficulties this generation faces, such as caring obligations and professional constraints, which can stifle happy emotional experiences. (Smith & Lee, 2020).

Finally, these composite scores are derived from summing all odd- and even-numbered items, respectively, to assess the overall responsiveness to emotional stimuli. Bar chart analyses and generational group mean comparisons revealed distinct variations among Generation Z, Millennials, Generation X, and Baby Boomers.

General Negative Reactivity

The present findings of the subscale “General Negative Reactivity” (involving the activation, intensity, and duration of an individual’s negative emotions) reveal significant generational differences in emotional responses. With an average of ($M=51.24\%$, $SD=11.6$) negative reactivity score, Generation Z stands out the most, indicating medium variability. Millennials, on the other hand, take the next position with a score of ($M=45.7\%$, $SD=12.115$), indicating the highest variability, while Baby Boomers and Generation X showcase less reactive scores, resulting in ($M=43.69\%$, $SD=9.945$) and ($M=42.93\%$, $SD=11.6$), respectively. Although the difference between Baby Boomers and Generation X is relatively less significant, Generation Z and Millennials are more sensitive towards higher negative emotional responses.

As a result, they tend to struggle more with emotion regulation. One of the major reasons would be the normalization of negative events and greater resiliency with coping mechanisms in crisis through lived experiences and accumulated wisdom; older generations (Baby Boomers and Generation X) are less susceptible to intense negative reactivity and, consequently, to symptoms of psychopathology (Grelle et al., 2023).

The study (Grelle et al., 2023), indicates that younger generations (Generation Z and Millennials), are more prone to greater increase in mental health symptoms compared to the adults of older generations as regulating these intense negative emotions is a lot harder and the poor emotion regulation skills often exhibit an emotional profile of high negative reactivity (Festucci et al., 2024). This rising vulnerability tends to lead towards a higher prevalence of conditions such as Generalized Anxiety Disorder (GAD) and Major Depressive Disorder (MDD) (Grelle et al., 2023). As a result, these individuals are more sensitive to developing psychopathology symptoms, underscoring the need for targeted mental health interventions and support systems (Grelle et al., 2023). Thus, outlining these generational gaps will promote emotional well-being across all age cohorts with effective coping mechanisms.

General Positive Reactivity

This subscale represents “General Positive Reactivity,” which involves the activation, duration, and intensity of individuals' positive emotions. This data shows that Generation Z has an average of 55.25 and a standard deviation of 10.856. Millennials have an average of 53.55% and a standard deviation of 10.438. However, Generation X has an average of 53.39 and a standard deviation of 12.414. Baby Boomers have an average of 56.49% and a standard deviation of 10.528. The average positive reactivity score of 56.49 is highest among baby boomers, suggesting that they react more strongly or intensely to pleasant emotional stimuli.

The average score of 55.2 for Generation Z indicates a comparatively high level of positive emotional reactivity. At 53.55, millennials' average positive reactivity is a little lower. At 53.39, the average positive reactivity score of Generation X is the lowest.

The intensity, activation, and duration of a person's emotional reaction to pleasant stimuli or events are referred to as positive emotional reactivity. It covers the duration, intensity, and rate

of occurrence of positive feelings. Highly positive reactivity individuals often accumulate psychological resources that serve as a buffer against stress, which is associated with enhanced resilience, adaptive coping, and overall well-being. (Tugade & Fredrickson, 2004). Positive reactivity has been shown to have a major impact on emotional regulation and mental health. People with higher levels of positive reactivity, for instance, are often less prone to anxiety and despair and have better social functioning. (Heller et al., 2015). Positive reactivity refers to how strongly and easily people react to emotionally charged stimuli. Results show a heightened emotional response to satisfying occurrences. Research shows that Baby Boomers had the highest favorable emotional responses, which may be due to their emotional maturity or diverse life experiences. The lower positive reactivity of Generation X may be due to midlife pressures or unique emotional regulation techniques. (Smith & Lee, 2020). Also, age and life experiences may affect positive reactivity. For example, older people may show more positive emotional reactivity because they have learned better ways to control their emotions.

Chapter 5

Conclusion

The Perth Emotional Reactivity Scale (PERS) was used in this study to look at how Baby Boomers, Generation X, Millennials, and Generation Z in Bangladesh react emotionally in different situations. The PERS evaluates emotional responses to both good and bad sensations in three ways: duration (how long the emotional experience lasts), intensity (how strong the feelings are), and activation (how quickly the feelings come up). The study used a mixed-methods survey to get information from 400 people, with an equal number of people from each of the four generations. Generation X had the most negative activation, which means they are more easily upset by bad things. This could be because they are under a lot of stress in their midlife, such as from family and professional pressures. But Generation X also had the shortest negative duration, which means they get over things emotionally faster. As a result of modern stressors, including social media demands and economic uncertainty, Generation Z had the longest negative duration and the highest negative intensity, signifying stronger and longer unpleasant emotional experiences. Baby Boomers showed the highest positive duration and overall positive reactivity, suggesting more consistent and long-lasting good emotional experiences. This is probably because they are more emotionally mature and have had more life experience. The strongest and fastest reactions to positive stimuli were exhibited by Generation Z and Generation X, who demonstrated the highest positive activation. Although they had moderate positive emotional reactivity, millennials often scored lower on positive activation and intensity. These results highlight how important generational and cultural factors are to emotional well-being in a non-Western, collectivist culture. The study emphasizes the need for generation-specific, culturally aware mental health interventions that target the unique emotional profiles and coping mechanisms found.

5.1| Limitation:

1. Some participants gave answers without much thinking, which could have affected the survey results.
2. Only 100 participants per generation may be insufficient to accurately represent the emotional responses of entire age groups. A larger number of samples is usually employed to achieve more reliable and general results.

5.2| Future Recommendations:

1. To learn more about how emotional reactivity and disparities between generations vary around the world, future research should include people from a wider range of cultures, socioeconomic backgrounds, and locations.
2. To find out more about how different generations feel, add qualitative data (such as focus groups or interviews) to PERS's numbers.
3. To learn more about how mental health changes from one generation to the next, look into how anxiety and depression are linked to scores on emotional reactivity tests.

References

- Becerra, R., & Campitelli, G. (n.d.). Emotional Reactivity: Critical analysis and proposal of a new scale. Copyright? 2012 Scientific & Academic Publishing. All Rights Reserved. <http://article.sapub.org/10.5923.j.ijap.20130306.03.html#Sec4>
- Charles, S. T., & Carstensen, L. L. (2009). Social and emotional aging. *Annual Review of Psychology*, 61(1), 383–409. <https://doi.org/10.1146/annurev.psych.093008.100448>
- Davidson, R. J. (1998). Affective Style and Affective Disorders: Perspectives from Affective Neuroscience. *Cognition & Emotion*, 12(3), 307–330. <https://doi.org/10.1080/026999398379628>
- Festucci, F., Pino, M. C., Viselli, L., Aurizio, G. D., Salfi, F., Amicucci, G., Corigliano, D., Atri, A. D., Ferrara, M., & Tempesta, D. (2024b). The assessment of emotion reactivity: The Italian validation of the Perth Emotional Reactivity Scale–Short Form (PERS-S). *European Journal of Neuroscience*, 59(7), 1848–1859. <https://doi.org/10.1111/ejn.16264>
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218–226. <https://doi.org/10.1037/0003-066X.56.3.218>
- Grelle, K., Shrestha, N., Ximenes, M., Perrotte, J., Cordaro, M., Deason, R. G., & Howard, K. (2023). The generation gap revisited: generational differences in mental health, maladaptive coping behaviors, and Pandemic-Related concerns during the initial COVID-19 pandemic. *Journal of Adult Development*, 30(4), 381–392. <https://doi.org/10.1007/s10804-023-09442-x>
- Gross, J. J., Carstensen, L. L., Pasupathi, M., Tsai, J., Skorpen, C. G., & Hsu, A. Y. C. (1997). Emotion and aging: Experience, expression, and control. *Psychology and Aging*, 12(4), 590–599. <https://doi.org/10.1037/0882-7974.12.4.590>
- Heller, A. S., Johnstone, T., Shackman, A. J., Light, S. N., Peterson, M. J., Kolden, G. G., ... Davidson, R. J. (2015). Reduced capacity to sustain positive emotion in major depression reflects diminished maintenance of fronto-striatal brain activation. *Proceedings of the National Academy of Sciences*, 112(52), 22445–22450. <https://doi.org/10.1073/pnas.0900651106>

- Hoemann, K., Xu, F., & Barrett, L. F. (2019). Emotion words, emotion concepts, and emotional development in children: A constructionist hypothesis. *Developmental Psychology*, 55(9), 1830–1849. <https://doi.org/10.1037/dev0000686>
- Islam, A., & Haque, S. (2021). Construction and validation of a generational identity scale on Bangladeshi older adults. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.703237>
- Preece, D., Becerra, R., & Campitelli, G. (2018). Assessing Emotional reactivity: Psychometric properties of the perth emotional reactivity scale and the development of a short form. *Journal of Personality Assessment*, 101(6), 589–597. <https://doi.org/10.1080/00223891.2018.1465430>
- Roberts, T., & Stone, A. (2021). Mental health awareness and emotional regulation among Millennials and Generation Z: A comparative study. *Journal of Youth Mental Health*, 14(3), 213–228. <https://doi.org/10.1080/17542863.2021.1901234>
- Smith, D., & Lee, K. (2020). Midlife stress and emotional well-being: Challenges faced by Generation X. *Journal of Adult Development*, 27(1), 54–67. <https://doi.org/10.1007/s10804-020-09352-1>
- Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology*, 86(2), 320–333. <https://doi.org/10.1037/0022-3514.86.2.320>
- Ye, Q., Liu, Y., Zhang, S., Ni, K., Fu, S., Dou, W., Wei, W., Li, B., Preece, D. A., & Cai, X. (2024). Cross-cultural adaptation and clinical application of the Perth Empathy Scale. *Journal of Clinical Psychology*, 80(7), 1473–1489. <https://doi.org/10.1002/jclp.23643>

Appendix A.

Perth Emotional Reactivity Scale (PERS)

This questionnaire is designed to measure different aspects of how you typically react to experiencing emotional events. Please score the following statements according to how much they apply or do not apply to you on a typical day. Circle one answer for each question.

		Very unlike me	Somewhat unlike me	Neither like or unlike me	Somewhat like me	Very like me
1.	I tend to get happy very easily.	1	2	3	4	5
2.	I tend to get upset very easily.	1	2	3	4	5
3.	When I'm happy, the feeling stays with me for quite a while.	1	2	3	4	5
4.	When I'm upset, it takes me quite a while to snap out of it.	1	2	3	4	5
5.	I think I experience happiness more intensely than my friends.	1	2	3	4	5
6.	If I'm upset, I feel it more intensely than everyone else.	1	2	3	4	5
7.	My emotions go automatically from neutral to positive.	1	2	3	4	5
8.	I tend to get disappointed very easily.	1	2	3	4	5
9.	When I'm feeling positive, I can stay like that for a good part of the day.	1	2	3	4	5
10.	It takes me longer than other people to get over an anger episode.	1	2	3	4	5
11.	When I am joyful, I tend to feel it very deeply.	1	2	3	4	5
12.	I experience the feeling of frustration very deeply.	1	2	3	4	5
13.	I tend to get enthusiastic about things very quickly.	1	2	3	4	5
14.	I tend to get frustrated very easily.	1	2	3	4	5

		Very unlike me	Somewhat unlike me	Neither like or unlike me	Somewhat like me	Very like me
15.	I can remain enthusiastic for quite a while	1	2	3	4	5
16.	It's hard for me to recover from frustration	1	2	3	4	5
17.	I experience positive mood very strongly	1	2	3	4	5
18.	Normally, when I'm unhappy I feel it very strongly	1	2	3	4	5
19.	I feel good about positive things in an instant	1	2	3	4	5
20.	My emotions go from neutral to negative very quickly	1	2	3	4	5
21.	I stay happy for a while if I receive pleasant news	1	2	3	4	5
22.	Once in a negative mood, it's hard to snap out of it	1	2	3	4	5
23.	When I'm enthusiastic about something, I feel it very powerfully	1	2	3	4	5
24.	When I'm angry I feel it very powerfully	1	2	3	4	5
25.	I react to good news very quickly	1	2	3	4	5
26.	I tend to get pessimistic about negative things very quickly	1	2	3	4	5
27.	If someone pays me a compliment, it improves my mood for a long time	1	2	3	4	5
28.	When annoyed about something, it ruins my entire day	1	2	3	4	5
29.	I experience positive feelings more deeply than my relatives and friends	1	2	3	4	5
30.	My negative feelings feel very intense	1	2	3	4	5

Scoring the PERS

Two composite scores and six subscale scores can be derived by summing a participant's responses (i.e., the number they select on the 5-point answer scale) for the relevant items. For all composites and subscales, higher scores indicate higher levels of reactivity in that domain; in other words, that emotions are more easily/quickly activated, more intense, and longer in their duration. The table below describes these subscales and composite scores, and how to calculate them. Subscale /composite scores, how to calculate:

Subscale /composite scores	How to calculate	Content measured
Subscale scores		
Negative-activation	Sum items 2, 8, 14, 20, 26.	The ease/speed of activation of one's negative emotions.
Negative-intensity	Sum items 6, 12, 18, 24, 30.	The intensity of one's negative emotions.
Negative-duration	Sum items 4, 10, 16, 22, 28.	The duration of one's negative emotions.
Positive-activation	Sum items 1, 7, 13, 19, 25.	The ease/speed of activation of one's positive emotions.
Positive-intensity	Sum items 5, 11, 17, 23, 29.	The intensity of one's positive emotions.
Positive-duration	Sum items 3, 9, 15, 21, 27.	The duration of one's positive emotions.
Composite scores		
General negative reactivity	Sum all even numbered items.	Overall level of reactivity (ease of activation, intensity, and duration) of one's negative emotions.
General positive reactivity	Sum all odd numbered items.	Overall level of reactivity (ease of activation, intensity, and duration) of one's positive emotions.