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# A systematic literature review: work engagement across generations

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# Περίληψη

Υπάρχει μεγάλη συζήτηση σχετικά με την ύπαρξη γενεών και τις διαφορές που παρουσιάζουν όταν βρίσκονται στο εργασιακό περιβάλλον. Πολλές ανασκοπήσεις στο παρελθόν προσπάθησαν να συνοψίσουν τα εμπειρικά στοιχεία όσον αφορά τις διαφορές των γενεών, είτε πρόκειται για τις εργασιακές τους αξίες, την εργασιακή ικανοποίηση ή τη στάση τους στην ηγεσία. Σε αυτή την ανασκόπηση, εξετάστηκε αρχικά το θεωρητικό υπόβαθρο της εργασιακής δέσμευσης και των γενεών, προκειμένου να κατανοηθεί η φύση τους.

Δεύτερον, πραγματοποιήθηκε συστηματική βιβλιογραφική ανασκόπηση για να συνοψιστούν έρευνες σχετικά με τις διαφορές μεταξύ των γενεών όσον αφορά την εργασιακή δέσμευση. Ο τρόπος με τον οποίο παρουσιάζονται τα βήματα που έγιναν, ακολουθεί τα βήματα του PRISMA 2020 (ταυτοποίηση, έλεγχος, ένταξη). Ορισμένα από τα κριτήρια που έχουν καθοριστεί, περιλαμβάνουν τη συμπερίληψη μόνο επιστημονικών άρθρων και διατριβών καθώς αναζητούνταν στις βάσεις δεδομένων. Επιπλέον, επιλέξιμες μελέτες θεωρήθηκαν μόνο εκείνες που είχαν χρησιμοποιήσει ως εργαλείο την κλίμακα δέσμευσης εργασίας της Ουτρέχτης (UWES). Συνολικά, αναζητήθηκαν 3 βάσεις δεδομένων, ακολουθώντας λέξεις-κλειδιά και διαφορετικές αναζητήσεις για κάθε γενεαλογική ομάδα.

Ως αποτέλεσμα, συνολικά 33 μελέτες κρίθηκαν επιλέξιμες, οι οποίες περιέχουν επίσης μελέτες που βρέθηκαν από αναφορές σε προηγούμενες ανασκοπήσεις, όπως και από την αναζήτηση των παραπομπών τους.

Οι επιλέξιμες μελέτες βρέθηκαν να είναι συγχρονικές και οι 13 εξέτασαν διαφορετικές γενιές σε μία έρευνα. Συνολικά, εξετάστηκαν 99 συγκρίσεις κατά ζεύγη μεταξύ 3 ζευγών γενεαλογικών ομάδων. Λίγο περισσότεροι από τους μισούς βρήκαν σημαντικές διαφορές μεταξύ των γενεών, ενώ η εργασιακή δέσμευση συνέχισε να μειώνεται από τις παλαιότερες στις νεότερες γενιές.

Η υποκλίμακα απορρόφησης βρέθηκε να είναι πιο σημαντικά διαφορετική μεταξύ των γενεών, ενώ εξετάστηκαν τυχόν αντιφατικά αποτελέσματα. Τέλος, σε αυτή τη διαδικασία, παρουσιάστηκε η επίδραση που έχει ο πολιτισμός και οι διάφοροι κλάδοι απασχόλησης στα αποτελέσματα.

# Summary

There has been great debate about the existence of generations and the differences they present when managed in a work setting. Many reviews in the past have tried to summarize the empirical evidence existing in generational differences whether being about their work values, job satisfaction or their attitudes in leadership. In this review, the theoretical background of work engagement and generations was first examined, in order to understand their nature.

Secondly, a systematic literature review was conducted to summarize evidence on generational differences when it comes to work engagement. The manner that the steps taken are reported, follow the steps of PRISMA 2020 (identification, screening, inclusion). Some of the criteria established, involve including only journal articles and dissertations as they were searched in the databases. Moreover, eligible studies were only deemed those who had used as an instrument the Utrecht Work Engagement Scale (UWES).

In total, 3 databases were searched, following keywords and different searches for each generational group. As a result, a total of 32 studies were deemed eligible, that also contain studies found from prior reviews' references and citations.

The eligible studies were found to be cross-sectional, and 13 examined multiple generations at once. In total, a number of 99 pairwise comparisons were examined between 3 pairs of generational groups. A little more than half found significant differences between generations while also that engagement kept decreasing from older to younger generations.

The Absorption subscale was found to be more significantly different across generations, while any contradictory results were investigated. In this process, the effect of culture and different industries have on the results were presented.

Lastly, it is reported that work engagement is decreasing from older to younger, and suggesting that ways should be found in order to make younger generations more engaged.

# 1. Introduction

The problem of generations has been a widely debated topic, some denying their existence while others supporting that they are a crucial component of an individual's identity that Human Resource managers should take into consideration. Moreso in the present, where the management of the workforce in comparison to the past proves to be a special challenge. For the first time, individuals from four different generations are required to coexist and cooperate in order to achieve common organizational goals.

The differences between generational groups have been the topic of many cross-sectional studies over the years, as well as suggestions on how to manage each group that seemingly share different values and priorities. Over the past decade, many literature reviews have tried to summarize the empirical evidence existing in generational differences whether being about their work values, job satisfaction or their attitudes in leadership. In this review, the theoretical background of work engagement and generations will be examined, in order to understand their nature.

We will start this dissertation with a review of prior reviews on generational differences in the workplace (Chapter 2). Then, a theoretical evolution of work engagement is presented along with its different instruments and distinguishability. In the following chapter the theoretical background of generational identity is presented, as well as the difficulties that might arise when trying to measure it empirically. In addition, the problems that arise with effects in the quantitative data are presented, voicing many experts that have tackled these issues over the years. Next, the problem of generalizability is mentioned, and how it could result in stereotypes.

In chapter 4, the methodology of the searches in this review is established, as well as the criteria enforced, together with the guidelines across the databases examined. There are also presented other

methods that produced additional eligible studies, as well as a diagram following the steps taken. Chapter 5 provides the results identified, starting with a presentation of the different characteristics the studies included exhibit, such as their type or the country they were conducted. Furthermore, their focus on different generational groups is shown.

In the results chapter, 99 pairwise comparisons are examined, in three tables one for each pair of generations. The *p*-value that was used in these studies to identify significant differences is presented, in order to find differences between generations. In each pairing, the older generation was examined and compared to the younger one, as well as the effects on the results, of culture, or field of work.

# 2. Prior reviews of generational differences in the workplace

## 2.1 Introduction

The differences between generational groups have been the topic of many cross-sectional studies over the years, as well as suggestions on how to manage each group that seemingly share different values and priorities. Over the past decade, many literature reviews have tried to sum up the empirical evidence collected while also suggesting a moving way forward when it comes to further research (see figure 1).

*Figure 1. Evolution of literature reviews on the topic*
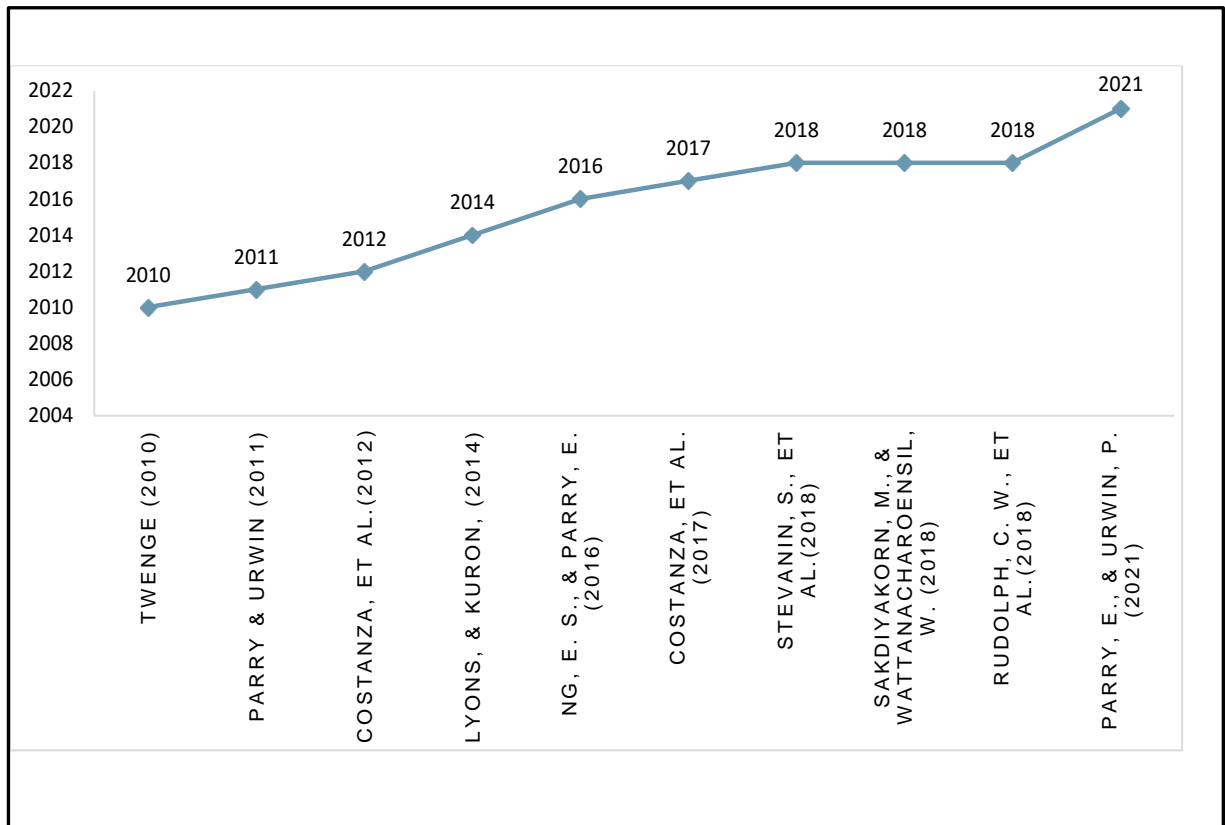


## 2.2 The evolution of prior reviews on the topic

Twenge, (2010) conducted one of the first narrative literature reviews about generational differences in the timeframe of 2000-2010. He focused on the differences in work values and encompassed a total of 4 studies of which 4 were longtitudinal studies, and 10 were cross-

sectional. He examined work values within 5 categories: work ethic, centrality, altruistic-extrinsic values, social-affiliation values and job satisfaction.

The origins of the studies Twenge, (2010) examined involved Australia, Europe, Belgium, New Zealand and the U.S. He found differences in extrinsic work values (i.e., salary) scoring higher in priority in generations X and Y. Moreover, in the younger generations he identified scores higher in individualistic traits such as assertiveness and self-esteem while also a higher value in leisure and less importance to work (in comparison to older generations, where work was identified in a more central role in their lives).

In the next year, Parry & Urwin, (2011) issued another interesting take on the existing evidence surrounding generational differences in work values. They first presented a review of the theoretical evidence existing, in accordance with the review of the empirical evidence within 1990-2009. They reviewed 16 studies, that involved cross-sectional, qualitative and longitudinal research. While also proposing the problems that each approach involved, in order to provide accurate results. Their findings suggested mixed results, as some of the studies found no evidence of differences at all, while others that found differences, were non-reliable due to the nature of the cross-sectional design (Parry & Urwin, 2011). In their review, they found that results contradict popular stereotypes so they suggested that more variables should be added when studying this subject, such as gender, ethnicity and nationality.

Costanza et al., (2012) took a different approach methodically in their review, conducting a meta-analysis, and examining different factors like job satisfaction, organizational commitment and turnover intention. They included 20 studies with a total number of 19.961 subjects dating from 1995 to 2009. Out of which, 16 were recorded in the U.S, 1 in Canada, 1 in Europe and 2 in New Zealand. Their findings were quite interesting, as they reported small and in some cases zero generational differences in the work context. Where they did find some moderate differences, they presented that other variables might have caused an effect on the result.

*Table 1. Prior literature reviews*

| Authors | Field | Focus | Type | Period | N | Citations |
|---|---|---|---|---|---|---|
| Twenge (2010) | Psychology | Work values | Narrative | 2000-2010 | 14 | 1.615 |
| Parry & Urwin (2011) | Management | Work values | Narrative | 1990-2009 | 16 | 1.562 |
| Costanza et al., 2012) | Management | Job satisfaction, organizational commitment, turnover intention | Meta-analysis | 1995-2009 | 20 | 1.046 |
| Lyons & Kuron (2014) | Management | Personality, Work values & attitudes, Leadership, Work-Life balance, Teamwork, Career patterns. | Narrative | 2000-2014 | 62 | 1.193 |
| Ng, & Parry (2016) | HRM | Personality, Work values, Leadership | Narrative | 2001-2015 | 35 | 110 |
| Costanza et al., (2017) | Management | Analytical methods on studying generational differences | Narrative | 1972-2010 | N/A | 65 |
| Stevanin et al., (2018) | Nursing | Job attitudes, Emotion-work related attitudes, Leadership | Mixed-Systematic | 1991-2017 | 33 | 123 |
| Sakdiyakorn & Wattanacharoensil, (2018) | Hospitality | Work values, Work attitudes, Leadership, Personality | Systematic | 2000-2016 | 49 | 64 |
| Rudolph et al., (2018) | Psychology | Leadership | Narrative | 2004-2014 | 18 | 273 |
| Parry, E., & Urwin, P. (2021) | Management | Theoretical frameworks | Narrative | N/A | N/A | 18 |

**Note:** N = number of studies used in the review

For instance, they found higher satisfaction in older generations that was explained with seniority, that is positively correlated with job satisfaction (Costanza et al., 2012).

Lyons & Kuron, (2014) comprised a much larger in scale review, exploring several different variables. They reviewed a total number of 62 studies dating from 2000-2014 including longitudinal and cross-sectional designs. They examined the following: personality, work values, work attitudes, leadership, teamwork, work-life balance and career patterns. Their findings concluded that despite a lot of the similarities depicted, the generational identity of each group differs in all aspects they examined (Lyons & Kuron, 2014).

When it comes to generational differences Ng & Parry, (2016) also reviewed the empirical evidence focusing on personality, work values and leadership. With a total of 35 studies within 2001 and 2015 in their narrative review they found "meaningful, material differences" between generations (Ng & Parry, 2016).

An interesting review was conducted by Costanza et al., (2017) not reviewing studies of generational differences but rather the methods used in empirical research. Three analytical methods were examined and to be tested were used two large data sets of military personnel and the general U.S population in the span of 38 years (1972-2010). Their findings proposed that the analytic method used impacted the conclusions, and that "multiple methods should be used to see the effect that analytic technique has on results and conclusions" (Costanza et al., 2017).

In a different context, a systematic review was conducted on the field of hospitality by Sakdiyakorn & Wattanacharoensil, (2018). They examined 49 papers from 2000 to 2016 with focus on work values, attitudes, job satisfaction, turnover intention, leadership, and personality. The studies examined originated from North America, Asia, Europe, and Oceania. They found that the attitude towards the hospitality field was mostly appealing in generation Y, with the intention to stay. Moreover, in

boomers they encountered their respect to authority, as well as their "live to work" attitude. In comparison to generation X that "work to live". In the work values of generation Y they found positive scores on teamwork, a desire for fast recognition, and good pay (Sakdiyakorn & Wattanacharoensil, 2018).

Rudolph et al., (2018) in their review, focused on generational differences when it comes to leadership. They examined 18 studies in the span of 10 years (2004-2014) including 14 empirical studies and 4 mixed-method studies. They found mixed results and referring to their conclusions in leadership preferences. Their findings mostly involved contradictory results in cross-sectional studies, while in the qualitative studies examined the differences they found suggested "overlap between generations" (Rudolph et al., 2018).

In the same year, another mixed-systematic review was conducted by (Stevanin et al., 2018) comprised of 33 studies. Their focus was on job attitudes, emotion-related job aspects and leadership. They examined studies from 1191 to 2017 and they found that boomers essentially had lower levels of stress and burnout. In comparison of course with generation Y that were found more sensitive to stress in general.

Lastly, Parry & Urwin, (2021) also conducted a review on the design involving studying generational differences. They argue that birthdate is not enough anymore to segment generational groups. Other parameters should be considered as well like gender and nationality. Common consequences of this problem seem to be misleading research results and inappropriate generational categories resulting in untrue *stereotypes (Parry & Urwin, 2021).*

## 2.3 Summary

As it is presented above, many reviews tackled the subject of generational differences in many different aspects of the work context. Happiness and satisfaction in the workplace have been a topic of great interest when it comes to Human Resource managers, as well as the conception that employees should be treated as "internal customers" of

the organization. Most empirical evidence referring to satisfaction and engagement in the workplace suggests that there is linkage between happier employees and better work performance. In this review, another aspect that has not yet been examined in reviews is analysed within the generational context, work engagement.
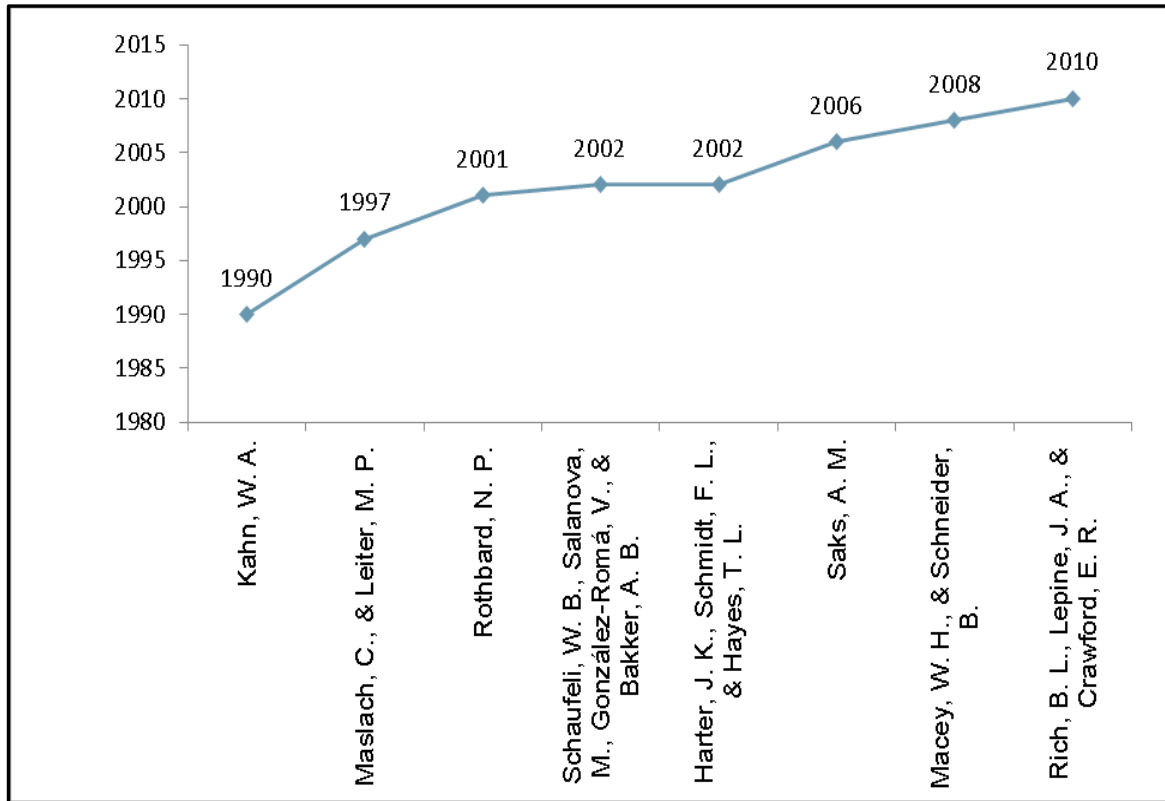
## 3. Work engagement

### 3.1 Theoretical background

Work engagement has been a popular theme of research among HRD professionals in recent years. However, the concept itself is relatively new, dating back only in the last three decades. Part of the reason is the way psychology was perceived up until the beginning of the new millennium. Ever since World War II, psychology was looked at as the study of finding ways to heal and repair damages (Seligman & Csikszentmihalyi, 2000).

Very little research and knowledge existed on how people, who were seemingly not as affected but led a normal life, evolved and thrived under more stable conditions. Seligman & Csikszentmihalyi, (2000) suggested it was time for a change. They defined positive psychology as a much-needed change in the focus on the field of psychology, to not only study how to repair damage that was already done, but to also help people accomplish a better quality of life and build positive habits that help shape happier people (Seligman & Csikszentmihalyi, 2000). It was on the prospect of this change in attitude when work engagement really came into the picture, with a distinguishable quality that broke it away from similar concepts of the time.

At its core, work engagement was first conceptualized by Kahn, (1990). His research was the first and only qualitative one on the subject, and it involved taking interviews of summer camp counsellors, and members of an architecture firm. With a total of 32 participants (16 of each), he measured their engagement and disengagement out of their experiences described on performing work tasks. Building off the self-role theory,

Kahn described personal engagement as "allowing one's self to bleed into their work roles, as well as express themselves physically, emotionally, and cognitively" (Kahn, 1990, p. 700), during work performance.

*Figure 2. Evolution of work engagement literature*



Similarly, work disengagement was presented as distancing one's self from the role assigned to them in the work environment, with a tendency of hiding their true self, and not allowing any expressions to bleed through (Kahn, 1990). It is important to note that Kahn, (1990) defined 3 dimensions of experiencing engagement: physically, meaning the physical energy spent and required in the role performance, emotionally, meaning the attachment one might feel to their duties as well as the company, and cognitively, meaning the focus and concentration one might feel during performing the tasks required of them.

During the same timeframe, another concept was emerging. Maslach et al., (1997), who were already deeply involved in analyzing and measuring the burnout syndrome, proposed that work engagement was the opposite pole of burnout, and was defined as a persevering positive

state by which one experiences high levels of challenge and pleasure (Maslach et al., 1997). This theory was expanded upon, by suggesting that the three dimensions of burnout, exhaustion, cynicism, and ineffectiveness were on the contrasting side of the three dimensions defined of work engagement: vigor, involvement, and efficacy (Maslach et al., 1997). According to the researchers, engaged workers had more energy while performing their work tasks and in contrast with burned-out employees, they found their work satisfying and challenging.

At the beginning of the new millennium, Rothbard, (2001), based on Kahn's, (1990) theory, defined work engagement as someone's presence psychologically in role activities. She proposed two important elements of work engagement: attention and absorption. Rothbard, (2001) weighed heavily on the cognitive aspect of work engagement and defined attention as the amount of time one processes the role assigned to them, as well as their concentration, while absorption as the intensity of engrossment experienced at work.

Relied upon and expanding on Maslach's et al., (1997) theory, Wilmar B. Schaufeli et al., (2002) identified work engagement as an autonomous distinct concept that should be assessed independently that was however negatively related to burnout. Work engagement was defined as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption." (p. 74). More precisely, vigor was defined as the physical high levels of energy an engaged employee encounters and was characterized by zest and vitality while working. Moreover, dedication was described as the amount of emotional involvement one faces paired with feelings of significance and importance, commanding a sense of loyalty in general (Wilmar B. Schaufeli et al., 2002). Lastly, absorption was characterized as the levels of immersion experienced while carrying out work-related tasks, and the amount of concentration involved (Wilmar B. Schaufeli et al., 2002).

It is important to mention that Wilmar B. Schaufeli et al., (2002) differentiated their view of work engagement from other similar concepts, by suggesting that, rather than a brief and passing positive cognitive

state of mind, work engagement is actually distinguished by a lasting effect, and is not, in fact, a cognitive state focused on any particular object, event, individual, or behavior (Wilmar B. Schaufeli et al., 2002).

Later that year, (Harter et al., 2002) brought a new perspective on the already existing theory, suggesting for the first time a profit linkage to work engagement, a concept that "is the most widely read and cited pieces of literature on employee engagement" (Shuck, 2011).

Harter et al., (2002) conceptualized work engagement as an individual's involvement and satisfaction and enthusiasm for work and devised a meta-analysis using a large amount of data collected and stored at the Gallup Organization on work engagement. Their findings provided a positive relationship between work engagement and business outcomes such as customer satisfaction, employee turnover, safety, productivity, and profitability (Harter et al., 2002). In conclusion, the researchers suggested that by improving the levels of employee engagement, they may increase organization unit outcomes, that in turn may provide businesses with profit, and it is a concept important to be examined empirically (Harter et al., 2002).

By the year 2006, engagement was once again conceptualized by Saks, (2006). He distinguished two types: job engagement, and organization engagement, that were entwined, but had some different antecedents, and outcomes (Saks, 2006). Firstly, work engagement was defined as the level someone is psychologically present in a specific work-related role. Job engagement was characterized by the role an individual has while at work, while organization engagement was the role of one as a member of an organization (Saks, 2006).

While Saks's, (2006) concept is essentially focused on the immersion and absorption aspect of engagement, it is important to point out that he defines work engagement as not only the attitude but the extent of attentiveness as well. Results of the research suggest that perceived organizational support affects both types of engagement, while job

characteristics affect only job engagement, and procedural justice affects only organization engagement (Saks, 2006).

Macey & Schneider, (2008) established work engagement into three forms dependent on one another that altogether compose the complete work engagement. Work engagement was described as a beneficial condition that has an organizational purpose, and inspires involvement, loyalty, enthusiasm, and energy, and it was segregated into state, trait, and behavioural engagement (Macey & Schneider, 2008). Trait engagement was described as a proactive attitude as well as having positive views of work, and life in general (Macey & Schneider, 2008).

Similarly, state engagement refers to feelings of immersion, involvement, and energy, and behavioural engagement was characterized by an extra-role behaviour, meaning taking the initiative and expanding beyond the role described by the organization (Macey & Schneider, 2008).

Lastly, based on Kahn's, (1990) theory on work engagement, while simultaneously encapsulating the essence of the theories that followed over the years, Rich et al., (2010) describe three aspects that engagement is comprised of: physical, emotional and cognitive. They also, correspondingly to Kahn, mentioned that work engagement refers to the concurrent employment of various components of someone's self into the work role (Rich et al., 2010). Generally, work engagement is a well-established construct, while it is also very distinguishable from other similar ones in the employee-organization relationship.

## 3.2 Work engagement and similar concepts

It has been a subject of great debate whether work engagement is a diverse construct or an "old wine in a new bottle" (Jeung, 2011). Although many similar concepts do exist, work engagement is distinguished for comprising different components measured independently, into a singular concept.

Job involvement also measures possible positive feelings while completing work tasks. As a measurable construct, it weighs heavily on the cognitive factor of the occurrence, giving it a sense of one-

dimensionality in contrast to work engagement that is described as three-dimensional (Hallberg & Schaufeli, 2006). Moreover, while work engagement is essentially the positive response to job characteristics, involvement is based on more intrinsic aspects (Hallberg & Schaufeli, 2006). Due to these conceptual differences and after measuring both with a sample of Information Communication Technology consultants, Hallberg & Schaufeli, (2006) found the concepts empirically distinct from one another.

Another item that was examined in the mentioned study was organizational commitment. It was described as the pride one experiences for their organization and their shared values, correlating with dedication and a small number in terms of turnover intention (Hallberg & Schaufeli, 2006). This concept adds a lot of gravity to the emotional aspect but it also diminishes the other two factors that work engagement encompasses. In conclusion, although both concepts refer to and measure some parts of work engagement, the distinguishability of the latter is in the prospect that it combines both elements while also adding the physical factor that is absent from the concepts already mentioned.

On the other side, the conceptualization of satisfaction offers a close resemblance to work engagement, as both are referring to happiness and positive feelings during work performance. However, there is a key difference. Job satisfaction involves feelings of peacefulness and a sense of satiation and fulfilment, while on the opposite side work engagement is an activating feeling suggesting enthusiasm and excitement for the assigned work activities (Schaufeli, 2012). This activation provides engaged employees with the motivation to work harder in order to evolve in their work.

At this point, it is important to separate work engagement and workaholism. Even though both provide similar results in the sense that both employees will work harder, their foundation is vastly different. Workaholism has a negative impact on a person's psyche encouraging a compulsive irresistible need to work harder (Taris et al., 2010). On the

contrary, engaged employees work more out of free will and genuine excitement because they find their job-related tasks challenging and they strive to achieve more in the work environment (Taris et al., 2010).

To sum up, many similar frameworks contained in the literature have a relation to work engagement. Most of them focus on one component while engagement encompasses a complete overview of the positive relationship between employees and an organization.

## 3.3 Measurement

Even though the first theoretical framework for work engagement was constructed in 1990, it wasn't until later in 1997 that it was measured and produced quantitative data. This was since Kahn, (1990), in his research utilized qualitative methods to establish his theory. So, in retrospect, Maslach et al., (1997) were the first to provide a quantitative measure to work engagement by suggesting that it is the contrasting pole of burnout and as a result that they could both be measured by the same instrument.

The Maslach Burnout Inventory "MBI" (Maslach & Jackson, 1981) was used to measure burnout and its antithesis, engagement. Its items focused heavily on employee and customer relations due to the perception at the time that burnout only occurred in professions that had direct involvement with people (Maslach & Jackson, 1981). In later years, after the instrument's rise in popularity in other fields as well, Maslach, C. et al. (1996) re-evaluated the items and established the "MBI-GS" which was a broadened and generalized rendition of the MBI that could include employees in all kinds of fields.

As the theories were progressing, so did the instruments. While work engagement was beginning to be viewed as an independent concept, a separate questionnaire was developed to measure it. The Gallup Workplace Audit "GWA" (Buckingham, M., & Coffman, C. 1999) was comprised of 12 items and is "the most extensively researched questionnaire" (Schaufeli, 2012, p. 4) on the topic. Because the GWA was mostly developed as a management tool, its results outline the

response of employees to job resources and not the description of work engagement as a psychological state (Schaufeli, 2012).

The most popular instrument to measure work engagement is undoubtedly the Utrecht Work Engagement Scale "UWES" (Schaufeli et al., 2002) and corresponding with the researchers' developed framework: it is measured with three subscales: vigor, dedication and absorption. All three are positively related and their total score is applicable as an overall measure of work engagement (Wilmar B. Schaufeli et al., 2002). The UWES has been well-established across the continents, while also its other shorter-item versions have been validated not presenting any major deviations in their outcomes (Schaufeli et al., 2002).

To conclude, as it is mentioned above, the instruments have been evolving almost as long as the frameworks of work engagement did. One thing that is certain, and is viewed in the most predominant instruments, is that work engagement should be measured three-dimensionally, correlating with the theory that it is similarly expressed in three forms: physically, emotionally and cognitively.

## 4. Generational Identity

### 4.1 Theoretical framework

In the work environment members of different generations must communicate with one another, while also pass on information and new skills. But the specific idea of membership in a generation is not yet entirely clear. Many perspectives on the matter exist each one adding a different angle to the existing literature.

The idea of generations was first examined in the field of sociology. Mannheim, (1952) discussed membership in a generation beyond it being a biological only phenomenon (i.e., the birthdate). He suggested a second condition in the membership that includes a group of people experiencing major historical events at the same time, adding a social aspect to generations. That due to their common experiences, can form

a sense of "shared consciousness" (p.306) and the specific group shares values as well as responses to similar situations.

Following this theory, (Joshi et al., 2010) move one step further, in suggesting that age-based identity which they define as common experiences outside the work environment could also develop effects on the behavioural responses within the organizational context. Based on Mannheim's, (1952) idea, that age-based identity forms a sense of shared consciousness that is dependent on historical events of that time, Joshi et al., (2010) come to expand upon that, by proposing that this kind of identity especially develops during the formative years of an individual's personality. More specifically, during their late teenage years and early twenties. So, for instance, the generation born from 1980 and forward (millennials), would not be influenced by the events of the '80s but from the events later, in their teen and young adult phase, meaning from 1995 and forward.

In their perception, generational identity in general, involves the knowledge and belonging to a generational group including a person's emotional attachment to their membership (Joshi et al., 2010). In accordance with this theme, they also accept the idea that each generation is preceding one, while also succeeding another. (Mannheim, 1952).

In this paper, the researchers also examined how under various circumstances the possible interactions between different generational groups and the varied identities they could undertake within a work cohort. They identified two more aspects of the generational identity that develop within the work environment and on occasion, might overpower the age-based identity: the cohort-based and the incumbency-based identity.

The idea of a cohort is used with many different interpretations among scholars. (Rhodes, 1983) approached the topic of influences in a work context as a cohort effect. In his perception, a cohort involves "a set of individuals entering a system at the same time" (p.1) which are presumed

to be similar, due to their shared experiences that distinguish them from other groups. Mason & Wolfinger, (2001) also adopt this idea, and seem to be using the term cohort effect interchangeably with generational identity. The effect of a cohort due its definition, entering a system at the same time, in this context the entry means the birthdate of the individuals, correlating with (Joshi et al., 2010) that their similar experiences in life as well, conduct the age-based identity.

Although in their paper, (Joshi et al., 2010) suggest based upon this definition of a cohort, another aspect of identity. Usually, when a group of people enter an organization at the same time, they usually undergo the same kind of training and socialization, resulting in shared experiences as they work their way up. Joshi et al., (2010) distinguish this group as another aspect of generational identity in an organization- a cohort based one- that goes beyond their birthdate and their experiences in life. This collective identity stems from the specific timeframe a group enters an organization and their seniority, that results in gaining experience simultaneously and in retrospect, sharing collective memories.

Both generational identities already mentioned have a common theme; the membership in them does not change by time or other events, it remains stable throughout. However, Joshi et al., (2010) also proposed that there is an identity that can be gained that changes over time, the incumbency-based one. It is based on the idea of the role in a work setting, and how it involves certain experiences and skills acquired that are a result of the occupation for a specific amount of time. They also suggest that these roles change within a timeframe, and this succession in roles provides a generational identity as well, as an individual is required to enter a role of a mentor to his successor, and that of the student, while accepting their new role in the organization.

It should also be mentioned according to the researchers that all three aspects of the generational identity established, might present simultaneously, or one might overpower the other, in accordance with a specific context.

Another perspective when it comes to generational identity, stems from the marketing literature. Marketeers, in order to segment a market, into different target groups have used generations one way or another. Whether it is as simple as an age-based identity, (chronological order in birth) or going as far as differentiating groups with different characteristics that are assigned to each generation as a result of common experiences. The idea that each generation has different characteristics and preferences in their consumer habits is widely accepted in the marketing literature.

In general, the scholars in this area when they define generations, use a definition closer to Mannheim (1952). Although some researchers add another aspect to the already existing definition. For instance, 'Kotler & 'Keller, (2006) propose that music, movies and politics of a specific time period also influence a person's behaviour and beliefs. This theory gives generational identity another characteristic, in a sense that the influence stems away from only big historical events but expands to the cultural events that characterize each period as well. This idea is widely utilized when launching a marketing campaign as marketeers move to trigger feelings of nostalgia when targeting specific groups of people. In order to attract their audience, and using pop culture references, as well as music and movies of their target group's time.

All in all, many perspectives exist when trying to define a generation. Most scholars have recently moved away from segmenting using only the birthdate. For many, it is not enough. The impact of big events in a group's formative years seems to be the most popular approach, while other views exist as well in many different fields and literature.

## 4.2 Generational identity, age, and period effects

Having established some general idea of the definition of generational identity across different literatures, it is important to distinguish it from other influences on a person's behaviour. The mass majority of empirical research on the subject are cross-sectional studies. Those involve taking representatives of each age-based generation (boomers, generation X, millennials and generation Z), at the same time and analysing the

differences they present. Rhodes (1983) provided the problem with this approach when studying generational differences.

In his paper, he established two effects that should be taken into consideration as well when examining empirically the concept of cohort effects (generational identity). The age effect, that involves differences between people when they are in a different age. More specifically, with the maturity that comes with aging (Rhodes, 1983). This effect is distinguishable, due to its occurrence beyond a specific timeframe or birthdate. So, for instance, if a sample of individuals in their 60s and another in their 20s are examined, it is certain, that there will be differences between them, when it comes to priorities in life, and views that evolve with experience and aging.

Polach (2007) expanded Rhodes's theory, suggesting that age is one of the factors that dictates how a person behaves in the work environment. He explained that it is better understood when separating the different life stages in someone's lifespan that change their perspective of the world. The age effect differs from the generational identity which is based on a specific timeline and its events as it is not dependent on any point in time.

Another effect that should be considered according to Rudolph & Zacher, (2016) is the period effect. The period effect are influences on the results in the time period they are examined. This effect is held constant when conducting a cross-sectional design, and as a result, the differences between groups could be either due to age or cohort (generational) effects. While also, in longitudinal designs, the period effect is difficult to the separated from the results, when they are measured over time.

In conclusion, in both methods, it is almost impossible to distinguish the differences between generational membership and other factors such as age or period. Some researchers disagree that the best approach to generational research is a cross-sectional study. Twenge (2010) proposes "the best design for determining generational differences is a time-lag study, which examines people of the same age at different

points in time" (p.202). And suggesting that with time-lag studies age is held constant, so the outcomes could either be due to generational identity, or time period effects. In his view, those are easier to distinguish because they affect all generations at the same time and can be determined with the passing of time. In any case, more research should be conducted when it comes to the methods used in empirical research in order to achieve clearer, and more coherent results.

## 4.3 Generalizability of findings

Many concerns have risen among researchers in different parts of the world when it comes to the characteristics assigned to each generational group. Most of these characterizations are based off studies in western countries (mainly US).

Among the literature over time, many stereotypes have risen when it comes to each generational group. Some of them involve boomers being more loyal, and respectful to authority, while as the generations evolve, this seems to be depleting, as recent research suggest that millennials seem to challenge authority. Millennials are also criticized heavily, for individualism and narcissism while also not many achievements to back it up (Stewart & Bernhardt, 2010). Claims, that have not yet been confirmed to be true, but are widely accepted as a stereotype, for that specific group.

Edmunds & Turner, (2005) proposed a different approach to the younger emerging generations. Specifically, millennials. According to their paper, modern age and technological advances have influenced greatly the world, whereas everything is in reach, and with the help of the internet, global communication and economies are possible. As a result of these changes, they suggest that millennials could be a "global generation", meaning a generation where values and beliefs are similar across the globe (Edmunds & Turner, 2005).

Although, others disagree with this perspective. Vincent, (2005) states that a global generation could not be possible yet because the global influences manifest within unique historical backgrounds of each

individual country. He suggests that each result should be examined in correlation with the unique historical and political background of different nations.

Empirical evidence also supports this idea. Especially when it comes to generations between eastern and western countries. Murphy et al., (2004) examined generational differences between US and Japanese individuals in their values. Their results move to support this concept, as a significant number of cross-cultural differences were found in their values (more than half in each category).

Egri & Ralston, (2004) also conducted an interesting study when it comes to this subject. They compared personal values of participants in US and China while also comparing their generational differences. When segmenting the generations in China, rather than accepting the definitions established in the US, they defined four different generations based on the historical and political context of China. Their findings encompassed some similarities in some factors, while differentiating when it comes to likeliness to change, conservation and self-esteem.

While important differences can be distinguished between eastern and western countries, some practitioners argue that results could be generalized in-between western-European countries. In theory, it might sound plausible, but when considering the economic, or political events that occurred in the last century, it is almost impossible to determine common ground when it comes to these experiences. Each country experienced these similar global events yes, very differently. Parry & Urwin, (2011) mention a great example of this. In the US, one of the big historical events that influenced generations according to literature, is the Kennedy assassination. An event, that outside the US could not have such a great impact as it did within the nation, like in the UK for example, two countries, that on the surface, might look quite similar.

Parry & Urwin, (2011) propose that each research design examining "dimensions of difference" (p.94) should also take into consideration ethnicity and culture as well as gender as factors. And that "generations

should be conceptualized as being within a particular national context"
(p.90).

# 5. Methodology

In this systematic review, work engagement was used as a parameter to determine differences in the generational identity. According to the past reviews that were examined before conducting this review, this measurement has not yet been examined before or as extensively as other concepts when it comes to generational differences.

In order to not make this review more complicated, age-based identity is accepted and searched for in the databases. As well as the terms baby boomers, generation x, generation y/ millennials and generation z as the specific titles for each generational group, despite all studies not conducted in the U.S.

## 5.1 Criteria

Concerning this review, several criteria had to be established, to separate the eligible studies needed and to conduct accurate conclusions in the results examined as well as in their consistency. For instance, only journal articles and dissertations were deemed eligible.

Another criterion established, was that qualitative studies were excluded, including only quantitative ones. To conduct this review and collect reliable results, quantitative data were preferred, with the use of statistic methods such as the p-value to determine significance in differences.

Moreover, it was established early on, that this review would examine studies that used the same instrument when measuring work engagement, in order to get more cohesive results. In this case, the Utrecht Work Engagement Scale (UWES) was preferred, due to its popularity among researchers, and reliable results. Also, in its many

uses, it has been used in countries all over the world, and extensively tested to its outcomes.

The UWES-17 which was the original instrument and was comprised of 17 items, 6 measuring vigor, 5 measuring dedication and 6 absorption. They hold a relatively high level of homogeneity as measured by Cronbach's α (ranging from 0.81 – 0.90). Furthermore, 2 other versions of the instrument were also presented by the creators themselves, the UWES-9 and UWES-3. Each version also measured the three subscales, with 3 items and 1 in each one respectively. Not any significant differences were reported when it comes to consistency, although the longer version provided more extensive results as the creators suggested. In this review, all three versions of the UWES were accepted.

From the studies examined, it was determined that cross-sectional studies would be included. Moreover, cross-generational designs were included. To be more specific, the sample of the study had to be separated in a generational group and the scores presented individually. Moreover, studies focusing on on a specific generation were to also be included should they fulfilled the criteria set.

Concerning language, all studies had to be in English, and in the databases searches. Additionally, no specific timeframe was established in terms of the year each study was conducted, even though the eligible studies found ranged from 2012-2022.

Lastly, with the research instrument, a total score of work engagement would be accepted, while also the individual subscale scores. Greater attention was given to the studies that assessed the importance of the generational differences they found with the p-value.

## 5.2 Databases
In total, three databases were searched, each one locating different aspects of literature. The first database searched was Scopus, specifically locating only journal articles and Proquest, for doctoral dissertation/ theses. Lastly, as a more general search Google Scholar

was examined a little broader, including chapters in books if they were deemed eligible as well as articles and doctoral dissertations.

The first database that was searched was Scopus. In total, 4 searches were conducted each using a different generational group (baby boomers, generation x, generation y/millennials, generation z). The search was limited to journal articles only, and the language was limited to English.

The first search referring to baby boomers has the following search string: ( ALL ( "uwes" ) AND ALL ( "boomers" ) ) AND ( LIMIT-TO ( DOCTYPE , "ar" ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ) ). It resulted in 13 studies which were exported for later viewing.

In the second search focused on generation x 7 results appeared following this search string: (ALL("uwes") AND ALL("Generation X")) AND ( LIMIT-TO ( DOCTYPE,"ar" ) ) AND ( LIMIT-TO ( LANGUAGE,"English" ) ).

The third search was relied on millennials and resulted in 52 studies using: (ALL("uwes") AND ALL("Millennials" OR "generation y")) AND ( LIMIT-TO ( LANGUAGE,"English" ) ) AND ( LIMIT-TO ( DOCTYPE,"ar" ) ).

Lastly, the last search focusing on generation z provided 7 results also with (ALL("uwes") AND ALL("Generation Z")) AND ( LIMIT-TO ( DOCTYPE,"ar" ) ) AND ( LIMIT-TO ( LANGUAGE, "English" ) ).

All the results mentioned above amounted to 79 in total, and in the next step they were screened and checked for duplicates. Out of the 79 studies found, 32 of them were duplicates and were removed, resulting in a total of 47 studies. That they were advanced onto the next level, and full-text reading, determining their eligibility.

In the second database examined, the results were limited to dissertation/ theses only following 4 searches for each generational group, while also only accepting studies written in English.

*Figure 3. PRISMA flowchart for generational differences in work engagement*



25
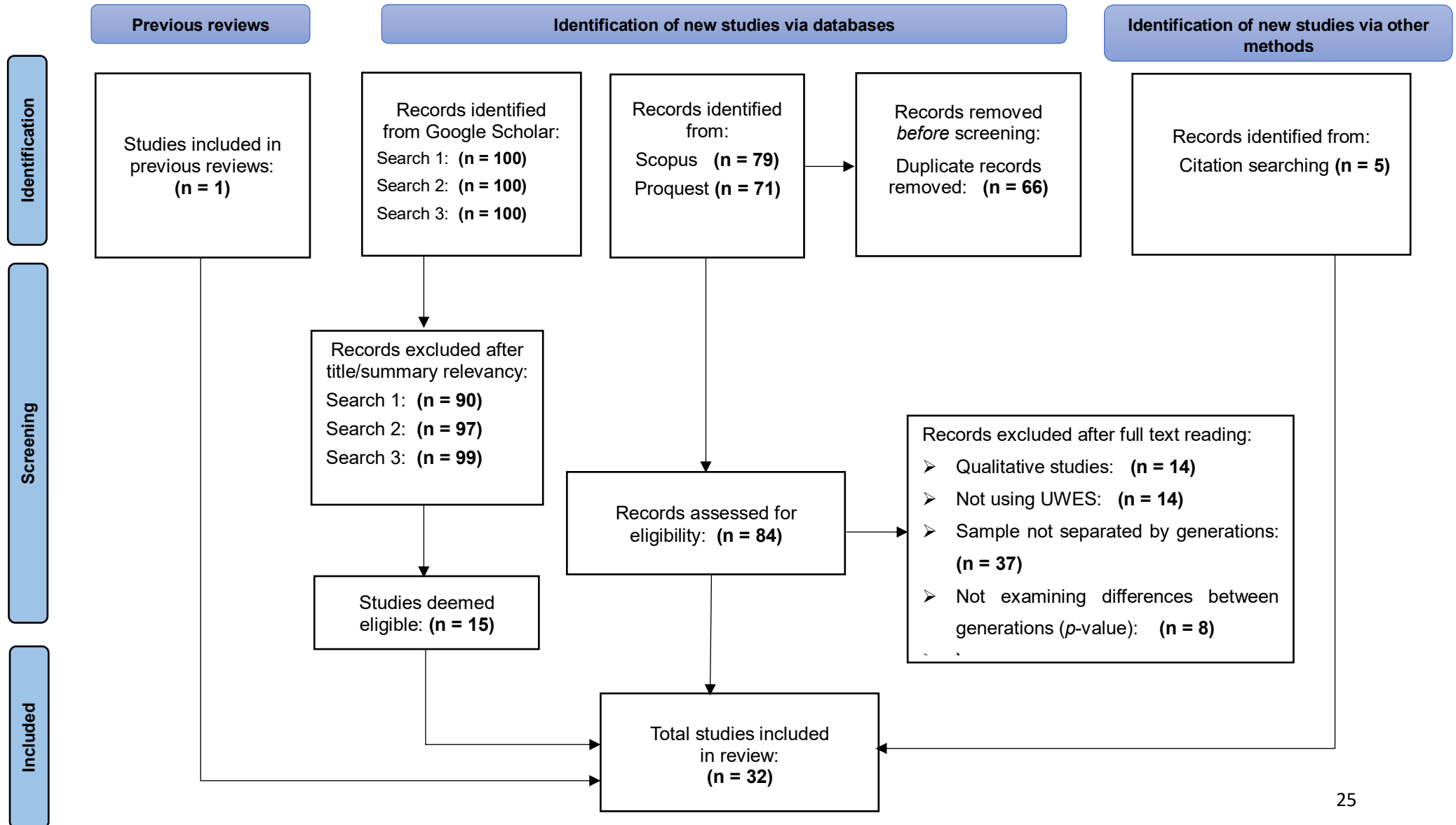
The first search for baby boomers provided 30 results with the following key words: "uwes" AND "boomers", excluding immediately any studies that did not mention the UWES as a measurement instrument. The second search involving generation x concluded in 17 studies, using the key words "uwes" AND "generation x".

For millennials the search included both names, millennials and generation y in order to cover studies mentioning either one of them. The results were also 17, with the keywords: "uwes" AND ("generation y" OR "millennials").

Lastly, for generation z the search provided 7 results with the keywords: "uwes" AND "generation z". In total, 17 studies were provided out of which, 34 were duplicates and were removed. So, a total of 37 dissertations were added for full-text reading and screening.

So, after the two databases mentioned above were searched for results, a broader search was conducted in order to confirm that no studies were missed or overlooked. Using the same keywords as already mentioned above, another 3 searches were conducted on Google Scholar. Due to many repeating studies by the time the third search was conducted, it was determined that 3 searches were enough to account for any missed studies according to the criteria established.

The keywords for each search were as following:
o    "generation X" "uwes" "work engagement"
o    "uwes" "work engagement" "generation Y" OR "millennials"
o    "uwes" "work engagement" "generation Z"


Out of each search, the first 100 results of Google Scholar were examined for eligibility. Firstly, by title, while on the next step the abstract of each study. Furthermore, after full-text reading, it was determined whether they were eligible for this review.

Out of the first search, and full-text reading, 10 studies were identified as eligible, while on the second one 3 more were found. Lastly, on the last search, 3 studies were found, out of which one was cross-sectional.

It was decided that due to the decline of new eligible studies found after each time on the searches, a fourth one would not be likely to provide new ones, only already examined. So, the fourth search was redacted.

## 5.3 Eligible studies

Before conducting the search on the databases mentioned above, another search was done involving the previous literature reviews on the subject of generational differences already found previously. During this search, 1 study was added after it was assessed for eligibility, from the references in the review of Stevanin et al., (2018).

Moreover, after the reviews were examined, a citation search was conducted in order to find more eligible studies that mention these reviews. This way, 5 more studies were identified and were added to the eligible results.

From Scopus and Proquest, a total of 84 studies were examined with full-text reading to determine their eligibility on each criterion. Which included only quantitative studies, using the UWES as their instrument, whether they were cross-generational or intra-generational and the work engagement on including the different subscales or not.

At first, 14 studies were eliminated for being qualitative and not including any quantitative data that could be worked with. Following that, all the other quantitative studies were examined on whether they used the UWES as the instrument for their research. During this step, another 14 studies were crossed because even though the UWES was mentioned (and so they passed during the search-string search) it was not the instrument used in the research.

Next, the remaining studies were also examined for their segmentation of the sample into different generational groups when conducting their research, as well as having different scores for each group. In this step, 37 studies were excluded, because even though they mentioned generational groups when describing the characteristics of their sample, the results were in scores for the whole sample, instead of each individual group.

In conclusion, 6 more studies were lastly eliminated, due to not examining the differences between the generations with the p-value. All in all, with all the methods used in searching, a total of 32 studies were included in this review.

In the results presented, in relation to the cross-generational studies, the *p-value* of every study is reviewed and conclusions are taken from the significance each difference presented.

# 6. Results

## 6.1 Characteristics of samples

Many of the studies included in this review have different characteristics when it comes to the generational group they examine, while also the location they were conducted, and the version of the instrument used.

Depending on the sources they were collected, the studies are separated between two categories: journal articles published, and Dissertations or theses presented.

*Table 2. Type and source of the studies*

| Source | Journal articles | Dissertations |
|---|---|---|
| Scopus | 6 | - |
| Proquest | - | 5 |
| Scholar | 10 | 5 |
| Citations | 4 | 1 |
| Referenced | 1 | - |
| **Total** | **21** | **11** |

Six journal articles were identified from Scopus, while 10 were from Google Scholar. Moreover, due to the citation search conducted on the prior literature reviews, 4 more studies were identified. In addition, in accordance with the 5 dissertations from Proquest, other 5 were deemed eligible during the search on Google Scholar. To summarize, in this

review 21 were journal articles while the dissertations amounted to 11 in a total of 32 studies.

Moreover, the studies are about evenly divided, with 40,6% being cross-generational examining two or three generations at the same time. Moreover, 59,3% were intra-generational, examining one generation at the time while focusing on differences between concepts.

A great emphasis was also given on the different countries that the studies had taken place. A preferable outcome would be a mostly spread location around the world so that a more complete view of generational differences could be considered across the globe. Also, in this way, more conclusions could be made, avoiding generalizations not applicable to a big part of the world, including stereotypes.

*Table 3. Geographical location of the studies*

| Continent | Studies |
|-----------|---------|
| Africa | 5 |
| America | 7 |
| Asia | 13 |
| Europe | 7 |

In this review, the studies included are quite varied, ranging across the four continents and are relatively evenly distributed throughout. Five of them were conducted in Africa, and more specifically, all results found originated from the south African region.

 From the 6 studies originated form America, 9 were from the United States, and most of them were doctoral dissertations. And one dissertation was conducted in Puerto Rico, due to having used a sample from a major health-care company in the location.

Most of the countries located in Asia, stemmed from Indonesia having 7 of the total number occurring there. In addition, 1  more study was examining a sample in Saudi Arabia, which was an article in a scientific

journal. Furthermore, studies were also included from countries such as China, Philippines, and the region of west Bengal, although quite smaller in number (1 from each country).

When it comes to Europe, in the western region 2 were gathered from the Netherlands, one being a thesis and the other a journal article. Moreover, one more article was collected from north-western Europe, located in Ireland. Two more studies were identified in eastern Europe, and more specifically in Croatia, and Serbia. All of them were journal articles.

In addition, 2 more studies were collected from northern and southern Europe. One article was located in Finland, involving participants (healthcare professionals) across five Finnish university hospitals. The second study is from Spain, including a sample of 167 employees, across 7 different companies in the Spanish region.

Most of the studies focused on employees working in various fields. The only exception was 7 of them which included research on college-university students and their engagement (generation z). Those studies are the most recent as well. In most studies it was not clear what kind of employees the participants were, but instead mentioned only the field, while some did not specify that either (only mentioned employees from companies without specifying). Generally, the studies seemed to be from employees across healthcare, hospitality, and corporate-office jobs.

In the following table, it is described extensively, what focus each study had either on a specific generational group (intra) or examined and compared differences across multiple groups (cross). Millennials seem to be the most researched group, and following are boomers and generation x.

Little research seems to be conducted on generation z this either showing on the number of studies included in this review compared to others, or during the database search, that seemed to have the smaller number of results. This can be attributed to how young this generation is compared to others, when just now the older individuals of this group are

| Authors | Boomers | Generation X | Millennials | Generation Z |
|---|---|---|---|---|
| Akhavan Sarraf et al., (2017) | X | X | X | X |
| Barkhuizen et al., (2014) | | | X | |
| Clark, (2019) | | | X | |
| Hisel, (2020) | X | X | X | |
| Hlongwane & Ledimo, (2015) | X | X | X | |
| Park & Gursoy, (2012) | X | X | X | |
| Nenadić, (2022) | | | | X |
| Kismono & Hanggarawati, (2022) | X | X | X | |
| Louw & Steyn, (2021) | | x | X | |
| Blando & Bernardo, (2017) | | | X | |
| Gumilang & Indrayanti, (2022) | | | X | |
| Lepistö et al., (2018) | X | X | X | |
| Douglas & Roberts, (2020) | X | X | X | |
| Yu, (2022) | | | X | |
| Forastero et al., (2018) | | | X | |
| Louis L'Oreal, (2021) | | | X | |
| Muselman, (2021) | X | X | X | |
| Wiroko & Evanytha, (2019) | | | X | |
| Siahaan & Gatari, (2020) | | | X | |
| Petrovic et al., (2017) | X | | X | |
| Fenzel, (2013) | X | X | X | |
| Jones, (2022) | | | | X |
| Sutrisno & Parahyanti, (2018) | | | X | |
| Coetzee et al., (2017) | X | X | X | |
| Thorton, (2015) | | | X | |
| Mulyati et al., (2018) | | | X | |
| Rashid & Asghar, (2016) | | | X | |
| Bano, (2015) | | X | X | |
| Sigaeva et al., (2022) | | | | X |
| Barten, (2022) | | | | X |
| Valldeneu et al., (2021) | | | X | |
| Versteeg et al., (2022) | | | | x |

*Table 4. Generations examined in each study.*

finishing studying in the university. And still, a large majority of them, are under the age of 18. So, when it comes to work engagement, not much research can be conducted as they are just now entering the workforce. Although as they do get older, interesting results might arise since this

is a generation that has had technology at their disposal since their birth, compared with previous generations.

Although in this review, the focus seems to shift towards millennial employees as 33 out of 38 studies include them in their analysis. Baby boomers follow with 16 studies examining them as well as generation x included in 11 studies. And lastly, as mentioned above, only 7 studies examine generation z. It is also interesting to note that 5 of them only focus on generation z and are not comparative, and that only 2 cross-sectional designs include this group.

## 6.2 Findings: cross-generational studies

Out of the studies examined in the cross-sectional aspect, 13 of them used the p-value to determine the significance in the differences between each generational group. In all papers as well as this review, $p.< 0.05$ is accepted as significant corresponding with $p.< 0.01$, $p.< 0.001$. The findings are categorized for each paper in different tables correlating with the generational groups compared.

The older generation in each occasion is compared regarding the scores of work engagement while determining them as higher, lower, or non-significant in relation to each younger group, according to the p-value. In total, when it comes to the studies examined, three comparisons were made, regarding the following groups: baby boomers, generation x, and millennials.

*Table 5. Baby Boomers vs Generation X*

| Studies | Total W.E | Vigor | Dedication | Absorption |
|---|---|---|---|---|
| Douglas & Roberts, (2020) | Higher* | Higher*** | Higher*** | Higher*** |
| Hisel, (2020) | N/S | Higher*** | N/S | Higher*** |
| Hlongwane & Ledimo, (2015) | N/S | N/S | N/S | N/S |
| Kismono & Hanggarawati, (2022) | *Higher*** | N/S | N/S | N/S |
| Akhavan Sarraf et al., (2017) | Higher** | N/S | Higher* | Higher*** |
| Park & Gursoy, (2012) | Higher** | Higher** | Higher** | Higher** |
| Lepistö et al., (2018) | N/S | N/S | N/S | N/S |
| Fenzel, (2013) | N/S | - | - | - |
| Coetzee et al., (2017) | Higher*** | - | - | - |
| Muselman, (2021) | N/S | - | - | - |

**Notes**: * → *p.* < 0.05,   ** → *p.* < 0.01 ,   *** → *p.* < 0.001 ,   N/S → non-significant, *p.* > 0.05

In table 6, the difference between baby boomers and generation x is viewed, on the total score of engagement and its subscales. Out of the 10 studies that examined this comparison, 5 found no significance on the total score.  Two of them had not been analysed in subscales, but only provided the overall score.

Hlongwane & Ledimo, (2015), found no significant differences on any subscale as well, concluding no difference on boomers and generation x. The sample for this study originated from South Africa and involved workers in healthcare. On the contrary, another sample from South Africa in the media industry (Coetzee et al., 2017), resulted in significant difference between this pairing (p.< 0.001). Although it should be taken into consideration that the scores of the three subscales were not shown. Due to the contradictory results the papers produce in the same region; it is not possible to make any conclusions on the matter. It is safe to assume that better separation between the generational groups should be considered, in order to befit the socioeconomic history of the location and establish more coherent results.

Another interesting finding is that when it comes to the studies that analyze the subscales as well, is that absorption seems to be significantly more diverse and higher in baby boomers with almost every study coming across a statistical value of $p. < 0.001$. Compared to the other two dimensions, there is an important diversity in the quantity of the studies that find difference, as well as its importance. It seems that vigor and dedication range lower on diversity between the groups compared to absorption ($p. < 0.05$, $p. < 0.01$) with only one study straying from this, (Douglas & Roberts, 2020) and establishing a significant difference of $p. < 0.001$.

Lepistö et al., (2018) conducted a study that found no significant difference between boomers and generation x, neither in total nor in any subscale. The study took place in Finland and the participants worked in healthcare. Although non-significant differences were spotted, it is important to note that the scores in each scale as well as in total, are relatively high. More specifically, in a Likert scale from 0-6 the scores range between 4.80-5.18. Working in healthcare is an important factor regarding the engagement experienced when working as an altruistic element is added, when compared to other professions that have no such impact on an individual.

Beyond that, it is also important to discuss the socioeconomic status of the country the study is conducted. Finland sems to be a country with stable economy, and with low levels of unemployment. Workers of both groups show high levels of engagement resulting in no significant differences between them. Now when compared with a country with less financial stability, the results might vary more there, as people must worry about many factors that weigh in their daily lives, and as a result, lower their engagement in work, especially in people that are not closer to retirement.

*Table 6. Baby Boomers vs Millennials*

| Studies | Total W.E | Vigor | Dedication | Absorption |
|---|---|---|---|---|
| Douglas & Roberts, (2020) | Higher*** | Higher* | Higher*** | Higher* |
| Hisel, (2020) | N/S | Higher*** | N/S | Higher*** |
| Hlongwane & Ledimo, (2015) | N/S | N/S | N/S | N/S |
| Kismono & Hanggarawati, (2022) | Higher** | Higher* | N/S | Higher* |
| Akhavan Sarraf et al., (2017) | Higher** | N/S | Higher* | Higher*** |
| Park & Gursoy, (2012) | Higher** | Higher** | Higher** | Higher** |
| Lepistö et al., (2018) | N/S | N/S | Higher* | Higher* |
| Petrovic et al., (2017) | Higher*** | - | - | - |
| Fenzel, (2013) | Higher** | - | - | - |
| Coetzee et al., (2017) | Higher*** | - | - | - |
| Muselman, (2021) | N/S | - | - | - |

Notes: $* \rightarrow p. < 0.05$ , $** \rightarrow p. < 0.01$ , $*** \rightarrow p. < 0.001$ , N/S → non-significant, $p. > 0.05$

Table 7 examines the pairing of the older vs the younger group. Baby boomers and millennials were compared in a total of 11 eligible studies and most of them found more significant differences between this pairing compared to boomers vs generation x.

Out of the studies only 4 found no significant differences in the total score of work engagement. On the contrary with the previous pairing though Lepistö et al., (2018) in this one found significant differences in the dedication and absorption subscales ($p. < 0.05$), while vigor remained non-significant. This might make the argument that this difference could be just a comparison of old versus young, as this study found that preceding or succeeding generations had no significant differences.

On studies that did not include the three subscales, most found significant differences between the pairing, while one diverted. Muselman, (2021) found no differences between this comparison either, while in her findings concluded that similarities in engagement exist and are not dependent on any specific generational group.

*Table 7. Generation X vs Millennials*

| Studies | Total W.E | Vigor | Dedication | Absorption |
| --- | --- | --- | --- | --- |
| Douglas & Roberts, (2020) | N/S | N/S | N/S | N/S |
| Hisel, (2020) | N/S | N/S | N/S | N/S |
| Hlongwane & Ledimo, (2015) | N/S | Lower* | Lower* | N/S |
| Kismono & Hanggarawati, (2022) | Higher** | Higher** | Higher* | Higher** |
| Akhavan Sarraf et al., (2017) | Higher** | Higher* | N/S | Higher*** |
| Louw & Steyn, (2021) | N/S | N/S | N/S | N/S |
| Park & Gursoy, (2012) | Higher** | Higher** | Higher** | Higher** |
| Lepistö et al., (2018) | N/S | N/S | N/S | N/S |
| Fenzel, (2013) | Higher* | - | - | - |
| Bano, (2015) | Higher** | - | - | - |
| Coetzee et al., (2017) | N/S | - | - | - |
| Muselman, (2021) | N/S | - | - | - |

<u>Notes</u>: * → *p.* < 0.05 , ** → *p.* < 0.01 , *** → *p.* < 0.001 , N/S → non-significant, *p.* > 0.05

Hisel, (2020) as it is seen on both tables above seems to have found significant differences between vigor and absorption, while the dedication seems to be the less significant subscale in both cases when it comes differences between the groups. The sample for this study was workers in the nursing workforce, and even though in statistical differences dedication is seemingly the least significant, in the overall scores of work engagement, all generations scored the highest in this subscale.

In terms of the subscales examined, absorption in this case seems to be significantly diverse between the two groups ranging higher in the older generations compared to vigor and dedication, compiling the highest.

In table 8, the two younger generations are compared. Out of all the pairings, this pair seems to be the most similar in the overall engagement scores as they have the most non-significant statistical differences in the quantity of the studies. Moreover, those that do find differences, range up to p. < 0.01 only.

Hlongwane & Ledimo, (2015) had an interesting take in their sample located in South Africa. In their study, they found millennials to be the more engaged group compared to generation x (p. < 0.05) in vigor and dedication. Even more surprising, as mentioned above that they found no significant difference between boomers and millennials as well as boomers and generation x. While on all pairings, they found no significant difference in the absorption subscale. These results are contradictory, and based on the authors' conclusion, are not subject to generalizations as they are applicable only to the organizational context the specific data was gathered in (Hlongwane & Ledimo, 2015).

In correlation with the other comparisons, generation x and millennials differ the most in the absorption subscale, with the scores ranging higher in generation x. What is also important to mention, is that even though some studies might stray from the expected results, and show non-significance, most of them follow the general conception that work engagement decreases with each generation. As it goes from the older being more engaged to the younger being less and that is evident in the scores that deplete from one generation to another.

As it is examined above, the cross-sectional studies reviewed, examined generational differences on these three groups: baby boomers, generation x and millennials. However, more recent studies are beginning to include generation z as well in their research as this generation is now getting old enough to enter the workforce.

Akhavan Sarraf et al., (2017) was one study that examined generation z as well and compared it the other three generations in order to find any differences between the groups. Between the two older generations (boomers, generation x) and generation z, they found significant differences in the total score, as well as in all subscales for boomers. For generation x absorption was not significant while the others has significant differences of p.< 0.01. When it comes to millennials and generation z, no significant difference was found in the overall score, as well as in the absorption subscale. While on the other hand, vigor and dedication seemed statistically diverse (p.< 0.05, p.< 0.01), more cross-

sectional research should be conducted between the four generations, in order to verify the differences found in this study for generation z.

## 7. Conclusion

All in all, in the studies included, a total 99 pairwise comparisons were examined. Of which, about 51,5% found significant differences in comparisons across all pairs. More specifically, in the boomers vs generation x pairing, 48,3% found significant differences, with the rest finding non-significance across the total score and subscales of work engagement. When boomers and millennials were compared on the other hand, 65,6% found significant differences making this pairing the more diverse compared to the other two.

Lastly, when it comes to generation x and millennials this pairing was the least different, with p-value analysis resulting in 41,6% presenting significant differences. Out of the 99 comparisons in total, 51 proved to be significantly different in relation to the pairing examined. In general, almost all studies followed the pattern of the older generation in each instance to be more engaged than its younger counterpart, in the total score as well as in the three subscales.

Now, when it comes to the total score and subscales across all three pairings, the total score, having been mentioned in all studies, scores the highest in significant differences (51,5%). In relation to the three subscales, out of the studies that presented them, it is certain that absorption scores higher in older generations in every occasion, and more specifically, above the other two at 59,0%. Vigor was found to be significantly different in the studies that examined it in only about 45,4%. And lastly, dedication seems to be lowest when it comes to any significant differences across the generational pairings (40,9%).

Nevertheless, there were also some studies that presented contradictory results, even though they were located in the same region. For instance, Hlongwane & Ledimo, (2015) had their study conducted in South Africa and found that millennials were more engaged than boomers or

generation x, a finding that contradicts the idea and finding of other studies that older generations tend to be more engaged. Moreover, other studies from South Africa found significant differences between generations comprising a total of very mixed results, as Hlongwane & Ledimo, (2015) found no significant differences otherwise.

So at this point, it is very important to mention the effect that culture has on these results, and that it might be the reason so many contradictions are encountered. As already mentioned above, generations should be separated based on the historical and political events unique to every region that research is conducted. South Africa, being so different historically, politically, and culturally from America might explain the contradictory results encountered. It should be implied that better segmentation in generational groups has to be done straying away from the American definitions that were used in these studies,

Furthermore, a certain similarity was encountered in studies across regions that shared the same work sector and presented similar occurrences. Also, these studies, contrary to other studies in the same region, that the samples belonged in different industries.

More specifically, studies in the healthcare sector showed no t many significant differences between generations, and especially in the dedication subscale. Firstly, Hisel, (2020) found significant differences in the vigor and absorption subscales, but not on dedication, across all three pairings. Compared to other studies from the United States that examined employees in the hospitality, and aerospace industry, (Park & Gursoy, 2012, Douglas & Roberts, 2020) and found differences on the dedication subscale.

The same occurrence is showed in the region of South Africa, as already mentioned above (Hlongwane & Ledimo, 2015, Coetzee et al., 2017), that produce contradictory results. The only difference that is found between these two studies, is the work sector. As once again, Hlongwane & Ledimo, (2015) who found no significant differences examines

employees in in healthcare, compared to Coetzee et al., (2017) that encompassed workers in the media industry.

In the same manner, Lepistö et al., (2018) took a sample of Finnish healthcare employees and found no significant difference in any subscale, including dedication.

In conclusion, three studies are presented, that deviate from other studies in the same region, but share one factor, their sample is healthcare employees. All found that in the dedication subscale, no differences occurred, and this might be due to the nature of this work in comparison to other fields. Healthcare includes another factor, and that is an altruistic aspect emotional attachment to their work role, compared to other industries. In addition, if looked more closely, most samples in this field include mostly women.

To summarize, generational differences are a factor that should be considered in management and is a crucial component of a person's identity inside, or outside the work environment. Concerning empirical studies, it is certain that more attention should be given to the different effects many factors have on results. As it is noticed, older generations are more engaged than younger ones and that ways should be found to make younger generations more engaged in their work role and duties.

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