The Importance of Financial and Pension Literacy in Closing the Financial Advice Gap in the U.K.

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Decisions about how to draw one's pension are complex. Individuals with poor pension literacy may risk making suboptimal decisions, especially in the absence of financial advice. This study found actual and perceived pension literacy to have opposite effects on advice seeking. Where high *actual* pension literacy increased the propensity to seek advice, high *perceived* pension literacy decreased it. After participants completed a test of pension literacy, they became aware of their pension knowledge, and some changed their minds about seeking advice. The study highlights the importance of pension education and has implications for regulators and industry professionals wanting to increase the uptake of financial advice.

Introduction

Without help, many individuals struggle to make important decisions about their pension in the decumulation phase.[1] This is the case for both the decreasing number of defined benefit (DB) and the growing number of defined contribution (DC) pension scheme members.

Members of DB schemes must decide the age at which to retire and understand the impact this has on their annual pension. They must also assess whether it is better or not to take a tax-free lump sum in exchange for a lower annual pension. Members must also understand how taking early retirement, or working past their scheme's normal retirement age, will impact their pension. These choices have associated tax implications specific to an individual's personal circumstances. In addition, an individual's retirement income can also be affected by scheme changes. DB schemes may be affected by changes to accrual rates[2] or changes from final, to career average, salary as a basis for calculating annual pension entitlements. In addition, as they become less affordable to run, some DB schemes have tried to entice their members into leaving them by buying them out.[3] These choices are hard to navigate, and most individuals will require help to do so.

For DC scheme members in the U.K., the 2015 Pension Freedoms Act (referred to as Pension Freedoms) introduced further complexity into pension choices by changing the way DC pensions are accessed. The reforms were transformational for both pension savers and pension providers. Previously, most DC pension members, at retirement, purchased an annuity that was expected to provide an income over their remaining life. Other drawdown options existed but were not available to the majority of savers due to their pension scheme rules, leaving annuities (which often were poor value for money) as the only option. The reforms enabled pension savings to be accessed more flexibly to suit individual circumstances.

Thus, the Pension Freedoms shifted the onus onto the individual: the savings were theirs, and they took responsibility for how and when they should be accessed. Savers can choose to convert their pension pot to an annuity, draw the entire pot in cash, draw the pot in smaller chunks using various drawdown arrangements, or leave savings invested. These options have different tax implications and can be combined in different ways. Pension providers were required to develop new products quickly and to offer advice suited to a myriad of different circumstances as savers took advantage of the new flexibility.

In addition, the reforms enabled members of private or funded public sector DB schemes to now opt out of them and put their pension savings into DC schemes. Whether this is beneficial is specific to an individual and to the DB scheme to which they belong. There is no doubt that the Pension Freedoms increased the discretion of pension savers but nonetheless also increased complexity in the market.

Poor pension decisions may have serious consequences for wellbeing in retirement. Since the reforms, examples of poor decisions include running out of money by making unsustainable rates of drawdown; losing substantial pension savings to taxation; withdrawing pension savings only to invest them into cash-based products providing poor returns; and transferring out of DB schemes when it is not beneficial to do so (Financial Conduct Authority, 2018).

A lack of pension literacy puts individuals at risk of making poor choices in the decumulation phase of retirement (The Personal Finance Research Centre, 2017; Association of British Insurers, 2020). This risk is likely to be higher for individuals who do not seek appropriate financial advice. In the U.K., financial advice is a legal regulatory requirement relating to DC pension pots of £30,000 or over with a guaranteed annuity rate attached, and for DB to DC transfers when the pension pot is £30,000 or over. Other than this, there is no legal requirement to seek advice.

A gap exists between those who need and those who seek financial help. This is referred to as the Financial Advice Gap and encompasses both advice and guidance (Financial Conduct Authority, 2016; Touray, 2022; Financial Conduct Authority, 2023). The Guidance Guarantee was introduced by the U.K. government to help pension savers. The Money and Pensions Service, an arms-length body sponsored by the Department of Work and Pensions, currently has responsibility for the provision of guidance. However, guidance and advice are different from each other.

Guidance is free and provided by such government agencies as well as by informal sources such as websites, employers, pension providers, and friends and family. However, it is not personalised and only likely to be helpful for individuals with straightforward choices. In addition, guidance provided by employers to their employees, for example, in relation to the best time to retire, may not be in the employees' best interests or be free from bias (Loretto and White, 2006; Vickerstaff, 2006). For those with more complex pension decisions, personalised financial advice provided by independent financial advisors is required, which is not free (Allam et al., 2016; Financial Conduct Authority, 2016; Thurley, 2018).

We have found no academic research about the association between *pension* literacy and financial advice. However, studies about *financial* literacy have shown lack of it to be a barrier to seeking advice (Brancati et al., 2017) and why individuals make poor retirement decisions (Lusardi and Mitchell, 2011a; Lusardi, 2012; Lusardi et al., 2014). There is also a debate over whether financial literacy and financial advice are complementary to (Robb et al., 2012; Porto and Xiao, 2016), or substitutes for (Hung and Yoong, 2010; Disney et al., 2015), each other. In other words, are those who are more financially literate more or less likely to seek financial advice?

Equally concerning is that individuals are not always aware of the extent of their *lack* of financial literacy. In other words, 'they don't know what they don't know'. Numerous studies have shown that *perceived*[4] is not always indicative of *actual* financial literacy (Radecki and Jaccard, 1995; Dunning et al., 2003; Carlson et al., 2009; Parker et al., 2012; Asaad, 2015; Iwona and Bialowas, 2015; Allgood and Walstad, 2016; Kiliyanni and Sivaraman, 2016; Kramer, 2016).

In addition, actual and perceived financial literacy do not always impact financial behaviour in the same way (Allgood and Walstad, 2016; Gentile *et al.*, 2016; Kramer, 2016; Porto and Xiao, 2016). In the context of pensions, the capacity to not know what you don't know is considerable, and individuals may be unaware of the extent of their knowledge or lack of it. If individuals think they know more than they do, then plausibly they may be less inclined to seek advice or guidance.

The aim of this study was to address a gap in the literature by exploring the association between *pension* literacy and the propensity to seek financial advice about the decumulation phase of retirement planning. Our contribution is unique as while pension literacy and financial literacy are linked, they remain distinct concepts (Eling and Jaenicke, 2023). Pension literacy requires basic financial literacy, but also knowledge about pensions in general and more specifically about one's own pension scheme. One can be financially literate but not pension literate.

We were interested to discover whether associations between *pension* literacy and financial advice seeking about the decumulation phase of retirement, support the literature concerning *financial* literacy and financial advice seeking about other areas of personal finance such as debt, mortgages, taxation, savings, and investments (Porto and Xiao, 2016; Robb *et al.,* 2012). Our findings have the potential to help policymakers address the financial advice gap in the U.K. by understanding how both actual and perceived pension literacy impact financial advice seeking about the decumulation phase of retirement.

Whilst the catalyst for the study emerges from the U.K., the impact of pension literacy on pension decisions and the propensity to seek advice is an important consideration for other countries as individuals now bear more responsibility for their own financial wellbeing in retirement. We focus on both actual and perceived pension literacy. Our research question was *How does pension literacy impact the propensity to seek financial advice when making choices about the decumulation phase of retirement?*

This article is structured as follows: the next section establishes the academic debates to which the study contributes. The hypotheses, sample characteristics, and the methods of data collection and analysis are then explained. The next two sections describe the results and discuss their significance. The final section summarises the key findings and contributions of the study.

Literature review

The financialisaton of daily life refers to the influence of financial markets and institutions on the everyday activities of individuals such as saving, investing, and retirement planning (Bobek, 2019; Agunsoye and James, 2024). Risks previously borne collectively by society now fall on individuals to manage (Langley, 2007). One such example is the shift from DB to DC pension schemes in the U.K. Individuals are now responsible for ensuring their own retirement security using financial products and markets. To do this effectively requires sufficient financial literacy to make the correct decisions (Langley and Leaver, 2012).

Many individuals in the U.K. admit to having poor financial and pension knowledge (Money Advice Service, 2020) and require financial advice or guidance to help them make optimal pension choices (Erturk *et al.*, 2007; The Personal Finance Research Centre, 2017; Association of British Insurers, 2020). There is empirical evidence to support the association between financial literacy and seeking financial advice about personal finances (Calcagno and Monticone, 2015; Stolper, 2015; Gentile *et al.*, 2016; Kramer, 2016; Porto and Xiao, 2016; Stolper and Walter, 2017). Individuals with high levels of income and wealth have been found to be more likely to seek financial advice (Bluethgen *et al.*, 2008; Finke *et al.*, 2011; Collins, 2012; Allgood and Walstad, 2016). The propensity to seek advice increases with age (Bluethgen *et al.*, 2008; Hackethal *et al.*, 2012), experience of investing (Hackethal *et al.*, 2012), and being risk averse (Gerhardt and Hackethal, 2009). Men are less likely to seek financial advice than women (Guiso and Jappelli, 2007), and there is conflicting

evidence on whether being married increases the likelihood of seeking financial advice (Hung and Yoong, 2010) or decreases it (Halko et al., 2012). Higher levels of education have been shown to increase the propensity to seek financial advice (Elmerick et al., 2002).

Most studies have found a complementary relationship between financial literacy and financial advice, in that financially literate individuals are more likely to seek advice (Collins, 2012; Robb et al., 2012; Calcagno and Monticone, 2015; Porto and Xiao, 2016; Seay et al., 2016). However, it has been argued that it is not possible, or desirable, to turn people into financial experts. As such, delegating financial decisions to an expert makes sense, suggesting that financial advice is a substitute for financial literacy (Disney et al., 2015; Money Advice Service, 2020). If this holds true, measures should exist to provide those in society who have poor financial literacy with help when they need it.

Studies have shown *perceived* financial literacy to significantly influence financial advice seeking (Allgood and Walstad, 2016; Gentile et al., 2016; Porto and Xiao, 2016). In the Netherlands, Kramer (2016) found that groups with high levels of self-assessed financial literacy, or confidence, were less likely to seek financial advice. In other words, those who thought they understood finance were less likely to seek out advice.

However, it is often the case that *perceived* is not indicative of *actual* financial literacy (Radecki and Jaccard, 1995; Dunning et al., 2003; Carlson et al., 2009; Parker et al., 2012; Asaad, 2015; Iwona and Bialowas, 2015; Allgood and Walstad, 2016; Kiliyanni and Sivaraman, 2016; Kramer, 2016). As such, an individual's perception of their own financial literacy should not be taken as a proxy of how literate they are (Agnew et al., 2011; Allgood and Walstad, 2016). If an individual is overconfident, this could be detrimental to their decision making (Asaad, 2015), resulting in framing errors,[5] engaging in more costly behaviours (Parker et al., 2012; Asaad, 2015) and underestimating risk (Goel and Thakor, 2008).

The next section explains the hypotheses development, method of data collection and analysis.

Methods

Hypotheses development

The empirical evidence supports an association between financial advice seeking in relation to personal finances and both *actual* and *perceived* financial literacy. We surmised that *pension* literacy is also associated with seeking financial advice, specifically in relation to pension decumulation decisions. Actual and perceived pension literacy may not impact the propensity to seek advice in the same way. Therefore, the following hypotheses were developed to address the research question:

H^1 – There is an association between individuals' *actual* pension literacy and seeking pension advice about the decumulation phase of retirement.

H^2 – There is an association between individuals' *perceived* pension literacy and seeking pension advice about the decumulation phase of retirement.

Development of the research instrument

There is no clear definition of pension literacy in the academic literature. For this study, a working definition of pension literacy was established:

The knowledge and skills in relation to pensions that are sufficient to make effective and optimal choices about retirement.

A survey was developed comprising forty questions (Appendix 1) and incorporating a test of pension knowledge based on twenty multiple choice questions split over three sections: basic financial literacy; basic pension literacy; and knowledge of the U.K. Pension Freedoms. Typically, tests of pension knowledge have comprised fewer questions and we argue that this test was more comprehensive than those used in previous studies. Some of the questions were adapted for the U.K. from the globally used and well-cited Lusardi and Mitchell study (Lusardi and Mitchell, 2011b). The majority were, however, developed with a panel of twenty experts from the financial services industry to ensure the questions were valid, accurate, and of the right difficulty for a layperson.

Three questions measured perceived pension knowledge and financial confidence using a 5-point Likert scale. Likert scales have been used in other studies to measure similar concepts (Parker *et al.*, 2012; Lusardi *et al.*, 2014; Asaad, 2015; Allgood and Walstad, 2016; Kramer, 2016; Porto and Xiao, 2016). Participants were asked: '*How would you rate your own level of knowledge about pensions?*' This question was included twice, once before completing the test of pension knowledge (Q5) and once after doing so, having just received their quiz results (Q39). We surmised that participants' perceptions of their pension knowledge may change having completed the test. To assess participants' level of financial confidence participants were asked: '*How confident are you that you will be financially secure in retirement?*' (Q4) and '*How confident do you feel about making choices on how to draw your pension?* (Q6).

Our outcome variable of interest was whether participants intended to pay for independent financial advice about drawing their pension. Participants were asked to respond yes, no, or don't know (Q7). To assess the personal characteristics and background of participants, other demographic and fact-finding questions were included. Before completing the twenty quiz questions, participants were informed they would receive their score and some feedback at the end of the survey. This was to incentivise completion of the full survey. In addition to this, regardless of score, all participants were directed to the Pension Wise website for more information about pensions.[6]

Data collection and sample

The survey was distributed electronically via social media and email over a six-month period. Six-hundred forty-five responses from participants living in the North East region of England were collected, having self-selected to participate.[7] Responses from participants aged under forty were discarded as being too young to yet be thinkning about decumulation choices. Therefore, the final sample comprised 581 participants. Table 1 shows the characteristics of the sample. Of those who provided a response, 45 per cent were male, 55 per cent female; 70.2 per cent were married; 82.5 per cent had an income level of less than £60,000 per annum; 44.1 per cent had only a DB pension, 14.1 per cent only a DC pension, 15.3 per cent had both types, 20.8 per cent did not know the type of pension they had, and 5.7 per cent had no pension.

Individuals educated to undergraduate degree level or higher were overrepresented in the study, as 72.1 per cent is very much higher than in the North East region and in England. Because general education and pension literacy are distinct concepts, we were interested to see if this bias would influence the results obtained.

Table 2 compares the demographics of the North East region to that of England. The population of the North East is less wealthy, has a lower average salary, a higher rate of unemployment, and lower level of general education. In addition, the North East has a 93 per cent White British population compared with 81 per cent in England (ONS, 2021). Therefore, we cannot claim our sample to be representative of the region or of England. These sample biases do raise issues of external validity and must be acknowledged.

Table 1. Characteristics of the participants

Group	Male (n)	Female (n)	Prefer to not say (n)	Total (n)	Per cent
Age					
40–45	59	73	2	134	23.1
46–50	57	60	1	118	20.3
51–55	58	81	2	141	24.3
56–60	41	74	1	116	20.0
61–65	31	26	0	57	9.8
66–70	8	3	0	11	1.9
Over 70	2	2	0	4	0.6
Marital Status					
Single	32	44	0	76	13.1
Married/civil partnership	194	212	2	408	70.2
Widowed	4	11	0	15	2.6
Divorced	14	38	0	52	9.0
Separated	8	6	0	14	2.4
Prefer not to say	4	8	4	16	2.7
Highest Level of Education					
No formal qualifications	5	3	0	8	1.4
GCSE or equivalent	35	31	0	66	11.4
A level or equivalent	37	40	0	77	13.3
Undergraduate degree or above	178	238	3	419	72.1
Prefer not to say	1	7	3	11	1.8
Income (per annum)					
Less than £20,000	22	54	1	77	13.3
£20,000 – £40,000	78	129	1	208	35.8
£40,001 – £60,000	94	99	1	194	33.4
£60,001 – £80,000	36	12	1	49	8.4
£80,001 – £100,000	7	6	0	13	2.2
More than £100,000	9	7	0	16	2.8
Prefer not to say	10	12	2	24	4.1
Pension Type					
Defined benefit (DB)	114	140	2	256	44.1
Defined contribution (DC)	47	34	1	82	14.1
Both DC and DB	46	42	1	89	15.3
Neither	14	17	2	33	5.7
I have a pension but do not know the type	35	86	0	121	20.8

(*Continued*)

Table 1. (*Continued*)

Group	Male (n)	Female (n)	Prefer to not say (n)	Total (n)	Per cent
Pension Size					
Under £30,000	19	41	0	60	10.3
£30,001 – £50,000	11	14	0	25	4.3
£50,001 – £100,000	15	20	0	35	6.0
£100,001 – £250,000	26	19	0	45	7.7
Over £250,000	21	14	1	36	6.2
Over £500,000	31	12	0	43	7.4
Don't know	114	183	3	300	51.6
Prefer not to say	19	16	2	37	6.5
Employment status					
Employed full time	200	216	5	421	72.5
Employed part time	21	84	1	106	18.2
Unemployed	2	2	0	4	0.7
Self employed	20	10	0	30	5.2
Homemaker	1	0	0	1	0.2
Retired	10	6	0	16	2.7
Prefer not to say	2	1	0	3	0.5
Ethnicity					
White British	242	308	2	552	95
Other	10	9	0	19	3.3
Prefer not to say	4	2	4	10	1.7

Source: Author.

Table 2. Demographics of the North East Region compared with England (ONS Census data 2021)

Demographic	North East Region	England
Population	2,646,772	56,536,419
Male to female ratio	0.96	0.96
Average salary	£34,116 pa	£40,746 pa
Median age of population	42.5 years	40.5 years
Unemployment rate	5.3%	3.9%
Average property price	£173,231	£342,297
Job density (jobs per individual of working age)	0.71	0.83
Ethnicity % White British	93%	81%
Education: % with degree or higher	34.5%	43.2%

Methods of data analysis – establishing variables

Actual pension literacy

Based on the approach of Lusardi *et al.* (2014), weightings were applied to each of the questions to account for difficulty. A correct answer was given more credit if most of the sample answered incorrectly, and incorrect answers were penalised more heavily if most of the sample answered correctly. Weighting according to how difficult respondents found the questions provided a more informative measure than using an absolute score. A total weighted score was determined for each participant by totalling individual question scores, and this provided a measure of *actual* pension literacy.

Following previous studies on financial literacy (Lusardi *et al.*, 2014; Gentile *et al.*, 2016), Principal Components Analysis was applied to the weighted question scores. Principal Components Analysis reduces a set of variables to smaller dimensions (or components). It was used here to explore if the concept of pension literacy could be reduced to smaller components.

The analysis was performed using an oblique rotation method, based on covariance. By applying Kaiser's criterion (Kaiser, 1974), five meaningful components were extracted, explaining 47.2 per cent of variance. Upon examination, each component was observed to represent different aspects of pension literacy and so there was no need to reduce the number of factors. Table 3 shows, by question topic, how the factor loadings were distributed to the components, which were named: Basic financial literacy; Basic pension knowledge; Pension planning; Advisor charging; and Withdrawing your pension. The factor scores were saved as continuous variables serving as proxies for each of the five elements of pension literacy, representing alternative measures of *actual* pension literacy.

Perceived pension literacy

The three questions on perceived knowledge and financial confidence were combined into one composite variable (by adding Likert scores together) representing *perceived* pension literacy. Perceived knowledge and confidence have been shown to be very closely related in the literature, and other studies have used a similar approach (Robb *et al.*, 2012; Asaad, 2015; Allgood and Walstad, 2016). Cronbach's alpha was 0.841, which is considered good (Cronbach, 1951).

Outcome variable

The study focused on paid-for financial advice as most DB and DC pension scheme members will need financial advice if they do not have very straightforward choices. An outcome variable was defined based on the survey question (Q7) *Do you intend to seek professional independent financial advice prior to making your pension choices?* A binary outcome was established where participants who did intend to seek advice were coded 1 and those who did not 0. Those who did not know whether they intended to seek advice, were excluded as missing values for this part of the analysis (n = 213).[8]

Control variables

Six control variables were included. These were income, age, gender, employment status, marital status, and pension pot size. These variables correlate with the dependent variables, and their relationship to financial advice seeking has been established in the literature. The full list of variables can be seen in Table 4.

Data analysis – logistic regressions

Some simple statistical analysis was performed on the survey data based on all 581 participants. Binary logistic regression was then applied to test the hypotheses based on the outcome variable.

Table 3. Principal components analysis – factor loadings

Question No	Question Topic	Component 1 Financial Literacy	Component 2 Pension Knowledge	Component 3 Pension Planning	Component 4 Advisor Charging	Component 5 Withdrawing Your Pension
12	Diversification of risk when investing in shares	0.696				
3	Risk appetite and fund selection	0.653				
5	Variability of returns between asset classes	0.629				
4	Time value of money	0.608				
11	Effect of inflation on income needs and pension value	0.551				
8	Knowledge of annuities related to pensions	0.538				
2	Effects of inflation on investment returns	0.528				
1	Compound interest	0.414				
17	Knowledge of pension products – drawdown		0.742			
18	Knowledge of pension products – annuity		0.662			
19	Knowledge of pensions – passing on fund upon death		0.648			
15	Fund value to seek financial advice to transfer DB to DC		0.479			
16	Types of funds accessible under 2015 Freedoms		0.454			
7	Knowledge of pension types – defined contribution		0.432			
20	Age of pension access under Freedoms		0.301			
10	Conception of how long a given fund would last			0.835		
9	Size of pot required to buy a given pension			0.529		
13	Knowledge of how financial advisors charge for services				0.983	
14	Income needs in retirement compared to present					0.846
6	Tax free withdrawal percentage					0.414

Source: SPSS.

Table 4. Variables in the logistic regressions

Variable	Coding
Outcome Variables	
Do you intend to seek financial advice in relation to your pension? (FA_O)	1 = yes intend to seek advice, 0 otherwise.
Main Predictor Variables	
Actual Pension Literacy – Total Score (ACT_TOT)	Total of weighted scores awarded for questions 1 to 20. Scores were standardised for regressions.
Component Factor Scores –	
Financial literacy score (C1_FL)	Total of factor scores assigned to components. Scores were standardised for regressions.
Pension literacy score (C2_PL)	
Pension planning score (C3_PP)	
Advisor charging score (C4_AC)	
Withdrawing your pension score (C5_WP)	
Perceived pension literacy (PER_TOT)	Total of Likert scores for question four, five, and six. Scores were standardised.
Control Variables	
Income (less than £20,000 per annum omitted group)	
£20,001 – £40,000 (INC1)	1 if £20,001 – £40,000, 0 otherwise.
£40,001 – £60,000 (INC2)	1 if £40,001 – £60,000, 0 otherwise.
Over £60,000 (IN3) (note that three categories over £60k were collapsed due to sparseness of data)	1 if over £60,001, 0 otherwise.
Marital status (single omitted group)	
Married/Civil partnership (MS1)	1 if married, 0 otherwise.
Widowed, divorced, or separated (MS2) (note these three categories were collapsed due to sparseness of data)	1 if widowed, divorced, or separated, 0 otherwise.
Age (40–45 omitted category)	
46–50 (AGE1)	1 if 46–50, 0 otherwise.
51–55 (AGE2)	1 if 51–55, 0 otherwise.
56–60 (AGE3)	1 if 56–60, 0 otherwise.
61–65 (AGE4)	1 if 61–65, 0 otherwise.
66–75 (AGE5) (note categories, 66–70 and over 70 were collapsed due to sparseness of data).	1 if 66–75. 0 otherwise.
Employment status (employed full time omitted group)	
Employed part time (ES1)	1 if employed part time, 0 otherwise.
Self-employed (ES2)	1 if self-employed, 0 otherwise.
Home maker, retired or unemployed (ES3) (note these three categories were collapsed due to sparseness of data)	1 if homemaker, retired, or unemployed, 0 otherwise.
Gender (male omitted category)	
Female (GEN)	1 if female, 0 otherwise.

(*Continued*)

Table 4. (*Continued*)

Variable	Coding
Pension pot size (under £30,000 omitted category)	
£30,000–£50,000 (PS1)	1 if £30,000–£50,000, 0 otherwise.
£50,001–£100,000 (PS2)	1 if £50,000–£100,000, 0 otherwise.
£100,001 – £250,000 (PS3)	1 if £100,000–£250,000, 0 otherwise.
Over £250,000 (PS4)	1 if over £250,000, 0 otherwise.
Over £500,000 (PS5)	1 if over £250,000, 0 otherwise.
Don't know (PS6)	1 if don't know, 0 otherwise.

Source: Author.

As well as participants answering 'don't know' ($n = 213$), we excluded any participants who had refused to answer any demographic questions ($n = 51$) providing a final sample of 317 participants for the regressions. Two regressions were conducted:

The first used actual and perceived total score and the control variables.

$$\text{Logit(FA\_O)} = \alpha + \beta\text{ACT\_TOT} + \beta\text{PER\_TOT} + \beta\text{INC1} + \beta\text{INC2} + \beta\text{INC3} + \beta\text{MS1}$$
$$+ \beta\text{MS2} + \beta\text{AGE1} + \beta\text{AGE2} + \beta\text{AGE3} + \beta\text{AGE4} + \beta\text{AGE5} + \beta\text{ES1} + \beta\text{ES2} + \beta\text{ES3}$$
$$+ \beta\text{GEN} + \beta\text{PS1} + \beta\text{PS2} + \beta\text{PS3} + \beta\text{PS4} + \beta\text{PS5} + \beta\text{PS6}$$

The second replaced actual pension literacy with the five-component scores from the principal components analysis, in addition to the perceived score.

$$\text{Logit(FA\_O)} = \alpha + \beta\text{C1\_FL} + \beta\text{C2\_PL} + \beta\text{C3\_PP} + \beta\text{C4\_AC} + \beta\text{C5\_WP}$$
$$+ \beta\text{PER\_TOT} + \beta\text{INC1} + \beta\text{INC2} + \beta\text{INC3} + \beta\text{MS1} + \beta\text{MS2} + \beta\text{AGE1}$$
$$+ \beta\text{AGE2} + \beta\text{AGE3} + \beta\text{AGE4} + \beta\text{AGE5} + \beta\text{ES1} + \beta\text{ES2} + \beta\text{ES3} + \beta\text{GEN}$$
$$+ \beta\text{PS1} + \beta\text{PS2} + \beta\text{PS3} + \beta\text{PS4} + \beta\text{PS5} + \beta\text{PS6}$$

All continuous measures were converted to Z scores for ease of output interpretation. In the next section, the results of the descriptive statistical analysis are discussed followed by the logistic regressions.

Results

Descriptive statistics

When asked *Do you intend to pay for independent professional financial advice prior to making your pension choices?*, 23 per cent of participants intended to seek financial advice, 40 per cent did not, and 37 per cent did not yet know. Half of the latter group were aged forty to fifty, possibly too far from retirement to decide. Policymakers still have time to persuade this group about the benefits of seeking advice.

Chi-squared tests revealed a significant difference in the intention to seek financial advice based on pension type ($x^2 (8, 581) = 34.49$, $p < 0.01$), indicating a relationship between seeking advice and pension type. Participants with only DC schemes were more likely to seek financial advice than those with DC and DB schemes or those with only DB schemes. However, Cramer's V, reported as 0.172, only showed a small effect size (Cohen, 1988). The small effect size could be attributed to the similar level of complexity of choices faced by both DB and DC pension scheme members at retirement. Sixty-three per cent of participants who were members of only DC schemes; 72 per cent of participants who were members of both DB and DC schemes, and 88 per

cent of participants who did not know the type of pension of which they were a member (which in itself shows a lack of pension literacy), either did not intend to seek advice, or did not know whether they would seek advice.

After having completed the test, 39.2 per cent of participants indicated their decision on whether to seek advice had changed. Of the participants who had originally indicated they *did not* intend to seek advice, 25.6 per cent changed their mind after completing the test (47.9 per cent said it would have no impact, and 25.6 per cent did not know). This suggests that, for most of these participants, not seeking advice may be due to factors other than their pension knowledge. However, of the participants who originally stated they *did not know* whether they would seek advice (37 per cent of the sample), nearly half (47.4 per cent) said that taking the test changed their minds. This suggests that perceived pension literacy had an impact on their decision. This emphasises the importance of perceived pension literacy and of self-assessment to better gauge one's actual level of pension knowledge.

Participants who intended to seek advice ($n = 134$) had better pension literacy ($M = 1.37$, $SD = 3.90$) than participants who did not ($n = 234$, $M = 0.21$, $SD = 4.32$). This held true for all five components determined by the principal component analysis. However, results were reversed for perceived pension literacy. Participants who intended to seek advice scored lower ($n = 134$, $M = 8.92$, $SD = 2.89$) than participants who did not intend to seek advice ($n = 234$, $M = 9.16$, $SD = 3.06$). Participants' mean scores based on the question *How would you rate your own level of knowledge about pensions?* fell after having taken the test. To determine if this was significant, a paired-samples t-test was conducted comparing participants' perceived knowledge before and after taking the test. There was a significant difference in the scores before the test ($M = 2.57$, $SD = 1.07$) and after ($M = 2.36$, SD, 1.01). This confirmed that having attempted the questions, participants rated their knowledge to be significantly lower than before doing so.

In summary, less than a quarter of participants intended to seek advice about drawing their pension. Participants who intended to seek advice had better *actual* pension literacy than those who did not. However, participants who did not intend to seek advice had higher *perceived* pension literacy. This suggests that those who think they know more about pensions are less inclined to seek advice. However, having taken the test, participants rated their own pension knowledge to be lower than before having done so, enabling them to better assess their own pension knowledge, and for some, this changed their mind about seeking advice.

Logistic regressions

Tables 5 and 6 show the results of the logistic regressions for the outcome variable *Do you intend to pay for independent professional financial advice prior to making your pension choices?* The odds ratios explain how a movement of one standard deviation above or below the mean value of the predictor variable impacts the likelihood of seeking advice.

Both actual ($p < 0.05$) and perceived pension literacy ($p < 0.01$) were significant predictors (Table 5). An increase of one standard deviation in the actual pension literacy score increased the intention of seeking advice by 1.4 times. However, an increase of one standard deviation in perceived literacy score decreased the likelihood of seeking advice by approximately 0.6 times.

Only the component of basic financial literacy was significant ($p < 0.10$) (Table 6). An increase of one standard deviation in financial literacy score, coincidentally, also increased the intention to seek advice by around 1.4 times.

Gender, employment status, income, and pension pot size were significant predictors of the intention to seek financial advice ($p < 0.05$) (Table 5). Females were twice as likely to seek financial advice. Self-employed participants were nearly five times as likely to seek advice than participants who were employed full time. Compared to participants with income less than £20,000 per annum, participants with incomes between £20,000 and £40,000 were 1.4 times as likely to seek advice, participants with incomes £40,000 to £60,000 were 2.4 times as likely, and

Table 5. Logistic regression: weighted actual and perceived scores and outcome variable: 'Do you intend to seek financial advice?' (FA_O)

Variables	Code	B	SE	Odds Ratio
Constant		−1.610**	0.657	0.200
Actual pension literacy	ACT_TOT	0.337**	0.167	1.401
Perceived pension literacy	PER_TOT	−0.452***	0.170	0.636
Age (reference 40–45)				
Age 46–50	AGE1	−0.223	0.401	0.800
Age 51–55	AGE2	−0.486	0.407	0.615
Age 56 – 60	AGE3	−0.368	0.434	0.692
Age 61–65	AGE4	−0.508	0.499	0.601
Age 66–75	AGE5	−1.207	1.011	0.299
Pension pot size (reference under 30k)				
Pot size (£30,000 to £50,000)	PS1	1.115	0.744	3.050
Pot size (£50,000 to £100,000)	PS2	0.102	0.622	1.107
Pot size (£100,000 to £250,000)	PS3	0.392	0.588	1.480
Pot size (over £250,000)	PS4	1.011	0.645	2.747
Pot size (over £500,000)	PS5	1.594**	0.648	4.925
Pot size (don't know)	PS6	−0.468	0.446	0.626
Employment status (reference employed FT)				
Employment status – employed part time	ES1	−0.048	0.398	0.953
Employment status – self employed	ES2	1.603***	0.618	4.969
Employment status – not working	ES3	0.366	0.810	1.441
Gender (reference male)				
Gender female	GEN	0.737**	0.305	2.089
Marital status (reference single)				
Marital status Married/civil partnership	MS1	0.437	0.406	1.548
Marital status widowed, divorced, or separated	MS2	0.187	0.379	1.206
Income (reference under £20,000 pa)				
Income £20,000 to £40,000	INC1	0.336	0.477	1.400
Income £40,000 to £60,000	INC2	0.873*	0.511	2.395
Income over £60,000	INC3	1.278**	0.584	3.588

n = 317.
***significant at the 1% level.
**significant at the 5% level.
*significant at the 10% level.

participants with incomes over £60,000 were 3.6 times as likely. Participants with pots over £500,000 were nearly five times more likely to seek advice than participants with pots under £30,000, and the associated odds ratios increased as pension pot size increased. Participants with pots between £30,000 and £50,000 were three times as likely to seek advice as participants with pots under £30,000. Participants who did not know the size of their pension pot were 0.6 times as likely to seek advice as participants with pots under £30,000.

Table 6. Logistic regression: component factor scores and outcome variable: 'Do you intend to seek financial advice?' (FA_O)

Variables	Code	B	SE	Odds Ratio
Constant		−0.511**	0.672	0.211
Component score – Financial literacy	C1_FL	0.304*	0.168	1.355
Component score – Pension literacy	C2_PL	0.109	0.169	1.115
Component score – Pension planning	C3_PP	0.113	0.140	1.120
Component score – Advisor charging	C4_AC	0.044	0.140	1.045
Component score – Withdrawing your pension	C5_WP	−0.018	0.144	0.982
Perceived pension literacy	PER_TOT	−0.158***	0.058	0.854
Age (reference 40–45)				
Age 46–50	AGE1	−0.195	0.404	0.823
Age 51–55	AGE2	−0.449	0.415	0.638
Age 56–60	AGE3	−0.328	0.444	0.721
Age 61–65	AGE4	−0.456	0.507	0.634
Age 66–75	AGE5	−1.223	1.016	0.294
Pension pot size (reference under 30k)				
Pot size (£30,000 to £50,000)	PS1	1.110	0.772	3.036
Pot size (£50,000 to £100,000)	PS2	0.087	0.638	1.091
Pot size (£100,000 to £250,000)	PS3	0.369	0.592	1.447
Pot size (over £250,000)	PS4	1.001	0.649	2.721
Pot size (over £500,000)	PS5	1.656**	0.655	5.239
Pot size (don't know)	PS6	−0.535	0.458	0.586
Employment status (reference employed FT)				
Employment status – employed part time	ES1	−0.064	0.404	0.938
Employment status – self employed	ES2	1.628***	0.622	5.092
Employment status – not working	ES3	0.295	0.815	1.343
Gender (reference male)				
Gender female	GEN	0.748**	0.306	2.113
Marital status (reference single)				
Marital status married/civil partnership	MS1	0.411	0.418	1.508
Marital status widowed, divorced, or separated	MS2	0.153	0.386	1.165
Income (reference under £20,000 pa)				
Income £20,000 to £40,000	INC1	0.276	0.487	1.317
Income £40,000 to £60,000	INC2	0.761	0.530	2.141
Income over £60,000	INC3	1.119*	0.612	3.062

$n = 317$.
***significant at the 1% level.
**significant at the 5% level.
*significant at the 10% level.

Discussion

The unique contribution of this study is to provide empirical evidence concerning the relationship between pension literacy and financial advice seeking in relation to pension decumulation decisions to assist practitioners and regulators. We address a gap in the academic literature by examining both *pension* literacy and the *decumulation* phase of retirement.

The motivation for the study originated from the U.K. However, pension literacy, pension decumulation decisions, and the uptake of financial advice are important areas for consideration beyond the U.K. This is especially the case as both DB and DC pension scheme members have more responsibility for their wellbeing in retirement than previously. This is likely to increasingly be the case as more DB pensions schemes are replaced with DC schemes.

Most individuals will require financial advice or guidance to help them make the most effective choices as they draw their pension savings (Financial Conduct Authority, 2016). Individuals with very small DC pension pots or members of unfunded DB pension schemes (not permitted to opt into a DC scheme) may find guidance alone will be sufficient.

However, as discussed, most DB pension scheme members have significant complexities to navigate when planning their retirement. For DC pension scheme members, choices are also complicated, made more so in the U.K., by the Pension Freedoms. Therefore, for both DB and DC pension scheme members, independent financial advice is likely to be required (Financial Conduct Authority, 2016). Despite this, our study showed that only 23 per cent of participants intended to seek financial advice, 40 per cent did not intend to seek advice, and 37 per cent did not yet know whether they would do so.

The results of the logistic regressions and the descriptive statistics support most financial literacy studies, in that they show a complementary relationship (Collins, 2012; Robb *et al.*, 2012; Calcagno and Monticone, 2015; Gentile *et al.*, 2016; Seay *et al.*, 2016). In this study, an increase of one standard deviation in the actual pension literacy score increased the intention of seeking advice by 1.4 times. In other words, pension literacy is required in order to seek advice, but individuals who most need advice, those who lack pension literacy, are less likely to seek it.

Unique to this study, pension literacy was deconstructed to five components based on principal components analysis. Only the component 'financial literacy' was statistically significant. An increase of one standard deviation in financial literacy score increased the intention to seek advice, coincidentally also by around 1.4 times. This suggests that one must be financially literate enough to weigh up the value of advice against the potential financial consequences of not doing so. Financial literacy appears, therefore, to be more important than pension-specific knowledge in seeking advice.

The findings enabled hypothesis one to be accepted:

H^1– There is an association between individuals' *actual* pension literacy and seeking pension advice about the decumulation phase of retirement.

In this study, perceived pension literacy was a significant predictor of the intention to seek advice at the one per cent level. An increase of one standard deviation in perceived literacy score, decreased the likelihood of seeking advice by approximately 0.6 times. This indicates that perceived pension literacy is a substitute for financial advice. The study supports previous suggestions that individuals who perceive their financial knowledge to be high, may not perceive the need to seek financial advice because they believe they possess sufficient pension knowledge to make decisions without it (Gentile *et al.*, 2016; Kramer, 2016; Porto and Xiao, 2016).

The findings enabled hypothesis two to be accepted:

H^2– There is an association between individuals' *perceived* pension literacy and seeking pension advice about the decumulation phase of retirement.

Various demographic factors were associated with seeking advice. This study found females are twice as likely to seek advice as males, supporting other studies (Guiso and Jappelli, 2007; Finke *et al.*, 2011). For women, good pension decision making is especially important as many may be at a financial disadvantage in terms of pension income (Ginn, 2004; Ginn and MacIntyre, 2012). Age was not a significant predictor of advice seeking in this study (possibly as the age range was limited to forty and over), whereas other studies have found age to be significant in seeking advice about other areas of personal finance, with the propensity to seek advice increasing with age (Bluethgen *et al.*, 2008; Hackethal *et al.*, 2012). Research has found that as personal incomes increase, so does the propensity to seek advice (Bluethgen *et al.*, 2008; Collins, 2012; Jappelli and Padula, 2013; Brancati *et al.*, 2017). Participants with incomes over £60,000 were 3.6 times as likely to seek advice than those with incomes under £20,000. Individuals with higher incomes can better afford financial advice, and cost has been identified as a factor in the decision to seek advice (Van Dalen *et al.*, 2017).

Pension pot size was significant in the intention to seek advice, supporting other studies (Bluethgen *et al.*, 2008; Jappelli and Padula, 2013; Brancati *et al.*, 2017). Participants with pots over £500,000 were nearly five times more likely to seek advice than participants with pots under £30,000, and the associated odds ratios increased as pension pot size increased. In the U.K., financial advice is a legal requirement for DB to DC transfers when the pension pot exceeds £30,000. Consistent with Brancati *et al.* (2017), this study found that self-employed participants were nearly five times more likely to seek advice than participants who were employed full time. This is perhaps not surprising as this group would not be exposed to any guidance facilitated by employers and is also encouraging.

In light of these findings, it is especially important for males and individuals who have lower levels of income and wealth to be incentivised to access appropriate forms of help to make pension decisions as these groups are less likely to seek advice. It is also important to address cases where individuals' perceived pension knowledge may be higher than it actually is. High perceived pension knowledge may also be a barrier to seeking advice.

Limitations of the study

This study is based on a reasonably small sample size and focused on one region of England, the North East, which is not demographically representative of the U.K. However, despite the sample limitations described earlier in the paper, most of the descriptive and inferential findings do support those of other academics in previous studies in the field of *financial* literacy and seeking advice about personal finance issues. This suggests they may be reflective of other populations outside of the North East region. This would need to be determined empirically with a larger, more representative sample.

Conclusion

Individuals must make complex choices about how and when to draw their personal pensions as they near retirement. Many individuals will need personalised financial advice to make pension decisions about the decumulation phase of retirement, as free guidance will not be tailored to their individual circumstances (Financial Conduct Authority, 2015). However, in the U.K., a gap still exists between those who need advice and those who seek it (Financial Conduct Authority, 2023). This study has sought to understand how pension literacy may contribute to the decision to seek financial advice.

Many individuals admit to having poor knowledge of pensions. However, due to the complexity of the subject and lack of opportunity to do so, to make an accurate assessment of one's knowledge is challenging, and it is possible many individuals 'don't know what they don't know'.

In this study, actual and perceived pension literacy did not impact financial advice seeking in the same way. A discrepancy between the two could put individuals at risk of making poor financial decisions that may jeopardise their financial wellbeing in retirement. If individuals believe they know more than they do, they may fail to access the financial help they need.

The research question addressed was *How does pension literacy impact the propensity to seek financial advice when making choices about the decumulation phase of retirement?*

Four main findings emerged from this study, which we believe will aid regulators and practitioners:

1. The higher participants' *actual* pension literacy, the more likely their intention to seek financial advice.
2. The higher participants' *perceived* pension literacy, the less likely their intention to seek advice. This may be because individuals think they know enough to make decisions without advice. Self-assessment of pension knowledge may go some way to addressing over-confidence, allowing individuals to become more aware of what they do and do not know about pensions and in turn possibly making it more likely they will seek advice.
3. Many participants have yet to make up their minds about seeking advice, which suggests there is scope to persuade this group of the benefits to be gained from doing so. Some participants, particularly those who stated they were undecided, having been made aware of their own level of pension literacy, changed their minds about seeking advice. This suggests that providing opportunities for individuals to assess their own pension knowledge could improve the uptake of financial advice. For others, though, their decision was not changed by taking the test. This suggests that, for these participants, factors other than pension literacy are important. This is an interesting area for further study.
4. The results suggest that basic *financial* literacy may be more important than specific pension knowledge in the intention to seek advice. This may be because an understanding of core financial concepts enables individuals to appreciate the value to be gained from doing so. We argue that financial literacy is an important element of pension literacy and a pre-requisite to an understanding of pensions. Financial literacy alone, however, may not be important enough to make good pension choices without advice. This is an interesting area for further study.

In light of the foregoing, further education is needed to increase knowledge about pensions for everyone, but especially for those less likely to seek help. In school, being taught basic principles of financial literacy, for example, compound interest, will help young people understand the benefits of contributing to a pension from an early age. As highlighted in a recent report by the House of Lords (2024), schools should be encouraged to engage with the resources that are available to them (see, for example, The Money and Pensions Service (2024) and the Personal Finance Education Group (2024)). In addition to formal education, this research has also demonstrated the power of social media as a way of increasing the public's curiosity about pensions, encouraging their engagement with self-assessment tools.

To conclude, most consumers now have more choice about how and when to draw their pensions. This is the case for both DB and DC pension scheme members. Individuals who need help in the form of financial advice are still not seeking it for various reasons and in the U.K., a financial advice gap still exists. This study has shown that improving the *actual* pension literacy, specifically basic financial literacy, of the public may be an important way to narrow this gap, and that lack of pension and financial literacy may be an important barrier to seeking financial advice. It also found that those with high *perceived* pension literacy are less likely to seek advice. We argue that, if the public are aware of their own pension knowledge (or lack of it), this will emphasise the need for help, stimulate education attempts and prevent overconfidence.

Pension literacy will be an even greater priority for future generations as more DB schemes are closed and replaced by DC schemes. These individuals will face complex decisions for which pension literacy, as well as access to appropriate forms of advice, will be increasingly important.

Notes

1 Decumulation refers to the liquidation of a pension plan to pay for retirement.

2 For example, a change from using 1/60th of final/average salary per year accrued to 1/80th, resulting in a lower final pension value.

3 This refers to a DB pension scheme offering members a 'cash equivalent transfer value'. This is payment of a cash sum in exchange for relief from the scheme's obligation to pay pension benefits in the future.

4 Perceived knowledge refers to one's own assessment of one's knowledge.

5 The Framing Effect proposes that individuals make choices based on how something is presented or 'framed' as opposed to on the facts presented.

6 The score out of 20 and brief feedback was given based on bandings (e.g. less than 20%). All participants were directed to the Pension Wise website. It was important all participants knew where to seek further information. Pension Wise was the brand developed to support consumers in the U.K. under the government's Guidance Guarantee.

7 It was decided to limit the sample to the North East region of England as 645 of 760 responses were from this region.

8 We included a question in the survey (Q2) asking participants about other sources of guidance. We found the measure of actual pension literacy was significant in seeking guidance from pension wise, pension providers, internet sources, and government sources. However, these results are not discussed in this paper as the focus is on paid-for advice.

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Appendix 1

Pension Literacy Survey (distributed using Survey Monkey)

Before starting the quiz section, please answer the following questions. The answers you give are completely anonymous, confidential, and will only be used for the purpose of this research project. If you are happy to proceed on this basis, please click OK to continue.

Q1 What type of private pension(s) do you have? Please ignore state pension.
 a) Defined benefit (pension based on final or average salary)
 b) Defined contribution/money purchase (pension based on contribution levels)
 c) Both defined benefit and defined contribution
 d) Neither
 e) I have a pension, but I don't know which type it is

Q2 Which of the following would you be likely to consult (or have already done so) prior to deciding on how to take your pension? (Indicate all that apply; then click OK to continue.)
 a) Pension Wise
 b) Independent Financial Advisor
 c) Pension Provider
 d) Internet Sources
 e) Government Publications
 f) Friends and Family
 g) Employer
 h) None of the above or I do not know

Q3 Have you ever tried to work out how much income you will need in retirement?
 a) Yes
 b) No

Q4 On a scale of 1 to 5, where 1 is not confident at all and 5 is very confident, how confident are you that you will be financially secure in your retirement?
 a) 1
 b) 2
 c) 3
 d) 4
 e) 5

Q5 On a scale of 1 to 5, where 1 is very poor and 5 is excellent, indicate how you would rate your own level of knowledge about pensions.
 a) 1
 b) 2
 c) 3
 d) 4
 e) 5

Q6 On a scale of 1 to 5, where 1 is not confident at all and 5 is very confident, how confident do you feel about making choices on how to take your pension?
 a) 1
 b) 2
 c) 3
 d) 4
 e) 5

Q7 Do you intend to pay for independent professional financial advice prior to making your pension choices?
 a) Yes
 b) No
 c) Don't know

Thank you – Now let's start the quiz! You will receive your score and feedback at the end. Quiz section one contains five questions and tests your basic financial literacy. Please answer all questions. Click OK to continue.

Q8 You invest £100 in a savings account with compound interest of 2 per cent per year. After 5 years, how much would you have in the account if you did not make any withdrawals?
  a) Exactly £110
  b) More than £110 (Correct)
  c) Less than £110
  d) Don't know
  e) Refuse to answer

Q9 You have savings in an account that pays an annual interest rate of 1.5 %. If annual inflation were 2 per cent after 1 year, which of the following would apply?
  a) I would be able to buy more with my savings than 1 year ago
  b) I would be able to buy less with my savings than 1 year ago (correct)
  c) I would be able to buy the same as 1 year ago
  d) Don't know
  e) Refuse to answer

Q10 Assume you are able to purchase some shares. Which of the following has the highest level of risk?
  a) Investment in shares of one company (correct)
  b) Investment in shares of an investment fund
  c) Both have equal risk
  d) Don't know
  e) Refuse to answer

Q11 Assume a friend inherits £10,000 today and his sibling inherits £10,000 3 years from now. Who is richer because of the inheritance?
  a) Your friend (correct)
  b) His sibling
  c) Both are equally as rich
  d) Don't know
  e) Refuse to answer

Q12 Which type of investment normally shows the greatest variability in returns over time?
  a) Savings accounts
  b) Corporate bonds
  c) Shares (correct)
  d) Don't know
  e) Refuse to answer

Thank you. Quiz section two contains eight questions and tests your understanding of basic pension concepts. Please answer all questions. Click OK to continue.

Q13 As a working figure, how much income do pension providers advise their clients will be needed in retirement?
  a) One-half of working income
  b) One-third of working income
  c) Two-thirds of working income (correct)
  d) Don't know
  e) Refuse to answer

Q14 What type of pension is described by the following: *Members (and sometimes their employers, but not always) make contributions invested in asset groups according to the risk preference of the individual. Upon retirement, the scheme member has accumulated a fund that can be used either to buy an annuity or to draw down in some other way according to preference.*
  a) Defined benefit contribution pension scheme
  b) State pension
  c) Defined contribution pension scheme (correct)
  d) Don't know
  e) Refuse to answer

Q15 Which type of pension is most likely to ensure you have a guaranteed income for life?
    a) Defined benefit pension scheme (correct)
    b) Defined contribution pension scheme
    c) Both are equally as likely
    d) Don't know
    e) Refuse to answer

Q16 If you want to have an income of around £25,000 per year, typically what size of pension pot do you require?
    a) £62,500
    b) £625,000 (correct)
    c) £950,000
    d) Don't know
    e) Refuse to answer

Q17 You have a pension fund of £100,000. How many years do you think it would last if you spent £10,000 per annum and you had investment returns on the remaining balance of 5 per cent per annum?
    a) 10 years
    b) 12 years (correct)
    c) 15 years
    d) Don't know
    e) Refuse to answer

Q18 What is the effect of high inflation on both your pension fund and on your income needs in retirement?
    a) There will be no effect on either
    b) Increase pension value and decrease income need
    c) Decrease pension value and increase income need (correct)
    d) Don't know
    e) Refuse to answer

Q19 If you are risk averse (you tend to avoid risk), which of the following investment funds are more likely to suit your risk preference?
    a) 50% bonds, 10% cash 20% property 20% shares (correct)
    b) 40% bonds, 10% cash, 20% property, 30% shares
    c) 30% bonds, 10% cash, 20% property, 40% shares
    d) Don't know
    e) Refuse to answer

Q20 You choose to go to a financial advisor for advice on pensions. On what basis can you expect your bill to be determined?
    a) Fee based (correct)
    b) Commission based
    c) Both of these
    d) Don't know
    e) Refuse to answer

Thank you. In 2015, the government introduced major pension reforms called Pension Freedoms. This final quiz section contains seven questions and tests your understanding of their impact. Please answer all questions. Click OK to continue.

Q21 Under the 2015 Pension Freedoms, at what age can individuals currently draw upon their pension funds?
    a) 50
    b) 55 (correct)
    c) 60
    d) Don't know
    e) Refuse to answer

Q22 Which types of pensions are accessible under the 2015 Pension Freedoms?
    a) All pensions
    b) Only defined contribution pensions (correct)
    c) Only defined benefit pensions
    d) Don't know
    e) Refuse to answer

Q23 How much of your qualifying pension fund can you normally withdraw tax-free?
    a) 25% (correct)
    b) 50%
    c) All of it
    d) Don't know
    e) Refuse to answer

Q24 Which pension product generally allows you to leave funds invested and withdraw money, as you require it?
    a) An annuity product
    b) A drawdown product (correct)
    c) Both of these
    d) Don't know
    e) Refuse to answer

Q25 Which pension product is most likely to provide a guaranteed income for life?
    a) An annuity product (correct)
    b) A drawdown product
    c) Both of these
    d) Don't know
    e) Refuse to answer

Q26 Which pension product allows you to pass on any unused funds to your family members when you die?
    a) An Annuity product
    b) A drawdown product (correct)
    c) Both of these
    d) Don't know
    e) Refuse to answer

Q27 Individuals with defined benefit schemes can access the total value of their pension fund at 55 only if they transfer it to a defined contribution scheme. What is the pension fund value at which they would be required to seek financial advice prior to the transfer?
    a) £10,000
    b) £30,000 (correct)
    c) £50,000
    d) Don't know
    e) Refuse to answer

You're nearly finished – while your quiz score is being calculated, please answer a few final questions about yourself.

Q28 What is your age?
    a) Under 40
    b) 40 – 50
    c) 51 – 60
    d) 61 – 70
    e) Over 70
    f) Prefer not to say

Q29 What is your highest level of educational qualification?
    a) No formal qualifications
    b) GCSE or equivalent
    c) A level or equivalent
    d) Undergraduate degree
    e) Master's degree
    f) PhD/doctorate
    g) Prefer not to say

Q30 What is your current level of personal income (from all sources)?
    a) Less than £20,000 per annum
    b) £20,000 to £40,000
    c) £40,000 to £60,000
    d) £60, 000 to £80,000
    e) £80,000 to £100,000
    f) More than £100,000
    g) Prefer not to say

Q31 In which region of the UK do you live? *
    a) North East
    b) North West
    c) Yorkshire and Humber
    d) East Midlands
    e) West Midlands
    f) East of England
    g) Greater London
    h) South East
    i) South West
    j) Wales
    k) Scotland
    l) Northern Ireland
    m) Prefer not to say

Q32 What best describes your main employment status?
    a) Employed full time
    b) Employed part time
    c) Unemployed seeking work
    d) Unemployed not seeking work
    e) Self-employed
    f) Unable to work
    g) Homemaker
    h) Retired
    i) Prefer not to say

Q33 In which sector have you spent the majority of your working life to date? (Please answer even if you are now retired).
    a) Public sector
    b) Private sector
    c) Not for profit sector
    d) Another sector not mentioned
    e) None of these
    f) Prefer not to say

Q34 In which industry have you spent the majority of your working life to date? *
    a) Agriculture
    b) Mining and extractives
    c) Manufacturing
    d) Construction
    e) Retail and Wholesale
    f) Transportation and storage
    g) Accommodation and Food
    h) Information and Communication
    i) Finance and Insurance
    j) Real Estate
    k) Professional and Support
    l) Government
    m) Health
    n) Education and Defence
    o) Other services
    p) None of these
    q) Prefer not to say

Q35 To which gender do you most identify?
    a) Male
    b) Female
    c) Transgender female
    d) Transgender male
    e) Not listed
    f) Prefer not to say

Q36 What is the current total size of your pension pot?
   a) Under £30,000
   b) £30,000 to £50,000
   c) £50,000 to £100,000
   d) £100,000 to £250,000
   e) Over £250,000
   f) Over £500,000
   g) Don't know
   h) Prefer not to say
Q37 What is your marital status?
   a) Single (never married)
   b) Married or in a civil partnership
   c) Widowed
   d) Divorced
   e) Separated
   f) Prefer not to say
Q38 What is your ethnicity?
   a) White
   b) Mixed multiple ethnic groups
   c) Asian/Asian British
   d) Black/African/Caribbean/Black British
   e) Chinese
   f) Arab
   g) Another ethnic group
   h) Prefer not to say
Q39 Having completed the pension literacy quiz, on a scale of 1 to 5 where 1 is very poor and 5 is excellent; indicate how you would rate your own level of knowledge about pensions?
   a) 1
   b) 2
   c) 3
   d) 4
   e) 5

Thank you for completing this survey. Your score is xxx.

Q40 Do you think that your quiz score will be likely to influence your decision about whether or not to seek independent financial advice in relation to your pension choices?
   a) Yes
   b) No
   c) Don't know
   d) Refuse to answer

Thank you for completing this survey.

Authors' note: Not all demographics are included in Table 1 (indicated by *). This was because there was a lack of representation across subgroups, so they were not analysed further in the study.