Older, but Not Always Wiser — Older Motorists' Perceptions of Their Information Needs

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Biography
The author is completing Doctoral research at Flinders University on the importance of learner self-awareness in road safety education and training, and has previously published on this topic. He works for the South Australian Government in road user behaviour research and policy development, specialising in road safety education matters. Prior to this, the author taught in a full range of education settings from pre-schools to seventy year olds.

Abstract
Public safety interests are paramount when providing information to older drivers, particularly when encouraging their appropriate self-regulation of driving. However, older drivers' views of their needs may not match those of professionals/experts who represent public safety interests. A demographically stratified sample of 102 South Australian drivers aged 65-85 was surveyed on their perceptions of their information needs, together with interviewing relevant professionals and visual examination of Australian older driver handbooks. The findings indicated older driver information provision should value maintaining driving as the learning basis, but the provision should cater more for different learning styles. Professionals believed future alternative mobility planning to be highly salient for older drivers, yet older drivers rated this a low priority. There is a need to investigate better ways of informing older drivers about matters of public safety interest, to ensure older drivers take more notice of them.

1. INTRODUCTION

This study compared older drivers' perceptions of their information needs with those of relevant professionals, and also the extents to which current information provisions meet those needs and the public safety interest. Most Australian states and territories produce information about driving for older drivers, but largely based on the perceptions of road authorities and relevant professionals of what those information needs are. It is vital that the provision of information to older drivers be a strategically planned intervention, and informed from a sound empirical basis (Kanouse 1998). The provision should pay attention to the views of older driver information needs held by both older drivers themselves and those of experts/professionals, although these views do not seem to have been a focus of much previous research.

For most older adults, taking note of information is an important part of their lives. It is essential to consider them as learners, and that adult learning is largely a self-directed process. Spigner-Littles et al. (1999) reported that learning among older adults is most effectively accomplished when older learners are allowed to have some control over their learning, and when new information is connected to, and built upon, prior knowledge and actual life experiences. For older driver information provision, this may well mean focussing on how to maintain their mobility. The OECD (2001) has asserted that the main purpose of any older driver program should be to support continued driving, for as long as it is compatible with safety requirements.

Older driver crash risk is currently considered to be not so much indicative of older drivers in general, but more of sub-groups of older drivers, particularly those suffering from significant cognitive and/or sensory decline (OECD 2001), and those who rarely or never adopt self-regulatory strategies and who also have poor driving skills (Charlton et al. 2001). Consequently, there is a public safety interest in providing older drivers with information about their specific needs, abilities and responsibilities, with the aim of encouraging appropriate self-regulation of their driving. Yet, there is little societal support to assist older drivers to cope with this negative rite of passage (Yassuda et al. 1997). It is important to support older drivers at this time, through obtaining a better understanding of their information needs.

Older people are very much a heterogenous group, their views differing by age, gender, location and as individuals. Consequently, research and past experience have suggested that learning materials for older drivers should involve a range of learning approaches, delivery mechanisms or information sources (Elliott et al. 1995; Truluck & Courtenay 1999), but in which self-determined information needs are a key construct. Such diversity can have a bonus in assisting drivers to accommodate and build on new information, especially that which may challenge existing knowledge and values about their driving. In particular, opportunities for self-assessment and for receiving individual driving performance feedback (Holland & Rabbitt 1992) are likely to influence self-regulatory behaviour and, if valued by older drivers, would merit serious consideration for incorporation into information provision.

2. METHODS

A survey was conducted among a stratified sample of 102 drivers aged 65-85 resident in South Australia. The drivers voluntarily completed a questionnaire as a result of the researcher's personal approach at a wide variety of venues/contexts, including public libraries (53% of completed surveys), community day centres (17%), prior to voluntary practical driving assessment (10%), doctors' waiting rooms (7%) other local centres (13%). The questionnaire commenced with background questions of a demographic nature, followed by asking whether the drivers were considering giving up driving, or intended to keep driving for the foreseeable future. They were then asked for their issues of concern about driving, any self-restrictions they imposed on their driving and why. Finally, participants were asked to numerically rate the importance of topics about driving, as well as preferred sources or formats for receiving information. The researcher then interviewed five professionals involved with older driver issues on their perceptions of these matters, for comparison with the actual statements and ratings made by the older drivers. Additionally, he examined nine Australian older driver handbooks, paying particular attention to which topics were included and the amount of coverage given in each handbook.

3. RESULTS AND DISCUSSION

The demography of the surveyed drivers was: Adelaide dwelling - 73.5%, rural dwelling - 26.5%;

- *ages 65-74*: males 38.2%, females 29.4%;
- *ages 75-85*: males 18.6%, females 13.7%.

These proportions were similar to those of the actual older driver population in South Australia ($\chi^2 = 0.99$, *df = 5, non sig,* $p > 0.05$).

The great majority of the participants (81) indicated they were highly mobile, driving daily or on most days of the week; public transport was seldom used. Only four of the 102 drivers indicated they had been thinking of giving up driving, an outcome consistent with Rabbitt et al. (1996).

Twenty-one drivers said they self-restricted their driving in one or more ways, and most of these were in the *younger* (65-75) age group. Encouragingly, current drivers aged 65-75 are experiencing better crash rates than their respective cohort over a decade ago (e.g., Hakamies-Blomqvist & Henriksson 1999).

Seventy-four drivers indicated that they had not self-regulated their driving in any way, consistent with Fildes et al. (1994) and Elliott et al. (1995). The age/gender profile of the 74 non self-regulating drivers was comparable to the older driver demographic profile for the State (χ^2 = 0.93, df = 3, non-sig, $p > 0.05$).

Most drivers' main issue(s) of concern related to the attitudes and behaviours of other drivers, or at least to factors external to themselves. Collectively, the issues related to driving management and maintenance of mobility, rather than cessation of driving. Very few of the drivers' chief concerns were expressed as being indicative of limitations within themselves. Fildes et al. (1994) found that other drivers' behaviours were the biggest concern of drivers of all ages. Therefore, the present finding for older drivers might simply reflect a general concern of drivers, rather than older drivers specifically.

The drivers rated the importance to them of receiving certain information about driving (on a list), using a 7- point scale (1 = least important and 7 = most important). The rank orders and mean ratings appear in Table 1. A Cronbach's alpha of 0.916 indicated a very high level of internal consistency in this rating exercise.

Table 1 Rank Orders and Mean Ratings of Important Information Topics

Rank Order	Item of Information	Mean Rating (*n* = 102)	SD
1	Road rules	6.70	1.07
2	Medical fitness to drive assessments	5.66	2.11
3	Effects of medications on driving	5.58	2.12
4	Ways of driving safely	5.50	2.16
5	Self-assessment checklist of health in relation to driving	5.45	1.99
6	Self-assessment checklist of driving behaviours	5.39	1.98
7	Requirements for renewing driver's licences	5.06	2.33
8	Car maintenance	4.91	2.46
9	Effect of medical conditions on driving	4.73	2.31
9	Judging gaps in traffic streams	4.73	2.41
11	Changes in crash involvement with age	4.70	2.19
12	How to use roundabouts	4.63	2.42
13	Practical driving assessment and feedback services	4.50	2.30
14	Safety features in new cars	4.19	2.36
15	Keeping up with the traffic flow	4.07	2.42
16	Planning retirement from driving	3.65	2.47
17	Combining public transport with car use on some days	3.21	2.32
18	Towing a caravan	2.33	2.35

Considering that the vast majority of the sample indicated an intention to continue driving for the foreseeable future, it is interesting that all top six topics were highly relevant to public safety interests. However, not all items of information highly relevant to public safety were rated of high importance by the drivers. Three items concerning specific driving behaviours, use of roundabouts, judging gaps in traffic and keeping up with traffic all received only moderately

important mean ratings of 4.07 - 4.73. More alarmingly, planning retirement from driving (3.65) and information about making greater use of public transport (3.21), both of high public safety interest, tended to be of minimal importance to the drivers.

The drivers' importance ratings for the information topics were analysed by age and gender (Table 2). In this analysis, females aged 65-74 stood out as having several information topic interests that had statistically significant higher importance ratings than the other three older driver groups, when a one way analysis of variance was conducted *(df = 3, 97, p < 0.05)*. These were, keeping up with the traffic flow *(F = 3.76)*, using roundabouts (*F* = 6.37), ways of driving safely that minimise crash involvement *(F = 3.99)*, practical driving assessments *(F = 2.91)*, car maintenance (*F* = 5.22), self assessment of driving behaviours *(F = 4.99)*, and self-assessment of health in relation to driving *(F = 3.06)*. There is a strong implication for special consideration of this group when presenting these information topics in the general context of information provision to older drivers.

Table 2 Information Topic Importance - Mean Ratings, by Age and Gender

Information Topic	**Males 65-74 Mean (SD) *n = 39***	**Males 75-85 Mean (SD) *n = 19***	**Females 65-74 Mean (SD) *n = 27***	**Females 75-85 Mean (SD) *n = 14***
Road rules	6.60 (0.81)	7.00 (0)	6.75 (0.62)	5.92 (2.10)
Judging gaps in traffic	4.64 (2.38)	4.38 (2.81)	5.50 (2.15)	4.15 (2.48)
Roundabouts*	4.09 (2.51)	3.77 (2.49)	6.17 (1.34)	3.92 (2.66)
Keeping up with traffic flow*	3.64 (2.66)	3.23 (2.13)	5.25 (2.14)	3.54 (2.70)
Licence renewals	3.82 (2.64)	5.54 (2.03)	5.75 (1.91)	4.92 (2.78)
Ways to drive safely*	4.82 (2.14)	6.00 (1.73)	6.83 (0.58)	4.62 (2.72)
Practical driving assessments*	3.82 (2.18)	4.46 (2.30)	5.58 (1.93)	3.31 (2.56)
Combining public transport with car travel on some journeys	3.00 (2.32)	3.84 (2.15)	3.75 (2.22)	2.77 (2.77)
Towing a caravan	2.91 (2.77)	2.23 (2.05)	1.50 (1.73)	1.92 (2.25)
Changes in crashes with age	4.55 (1.81)	5.31 (1.38)	5.33 (2.19)	3.85 (2.79)
Medical fitness to drive assessments	4.73 (2.33)	5.08 (2.53)	6.83 (0.58)	5.23 (2.42)
Car maintenance*	5.00 (2.28)	4.38 (2.29)	6.33 (1.07)	4.08 (2.99)
Safety features of new cars	4.64 (2.38)	3.92 (2.43)	4.17 (1.80)	3.15 (2.61)
Self-assessment of driving behaviours*	5.72 (1.42)	4.08 (2.22)	6.17 (1.11)	4.08 (2.92)
Self-assessment of health*	5.27 (2.05)	4.00 (2.24)	6.00 (1.81)	5.31 (2.14)
Medical conditions	4.45 (1.97)	4.85 (2.58)	4.92 (2.50)	4.31 (2.63)
Medicines & driving	5.73 (1.62)	5.38 (2.47)	5.83 (2.00)	4.38 (2.60)
Planning retirement from driving	3.55 (2.50)	3.46 (2.73)	3.75 (2.70)	2.46 (2.11)

* Significant age/gender differences, using one way ANOVA, p<0.05

Drivers were asked to use a similar 7-point scale to rate the importance of various *sources* for obtaining information about driving (Table 3). A Cronbach's alpha of 0.816 indicated a high level of internal consistency in the ratings.

Nearly all of the top five item ratings in Table 3 suggested a strong preference for informal learning opportunities, such as those afforded through common media channels of print and television. It is possible, though, that such information sources are highly valued by drivers of all ages. The relatively high importance accorded to doctor's feedback suggested that many of the older drivers placed a high value on personalised verbal information about driving, in addition to general informal learning approaches, a finding similar to that of Rabbitt et al. (1996).

Two sources of information, pamphlets and handbooks, have been the mainstay or traditional means of conveying information to older drivers to date. Yet, the drivers tended to rate these sources with low importance (pamphlets 2.91, handbooks 2.93) rather than at the high level traditionally presumed by those who provide information to older drivers. Nevertheless, almost one third of the sample still assigned relatively high importance ratings of between 5 and 7 to each of these sources. It would be imprudent, therefore, to suggest that pamphlets and handbooks are of little or no value, as small proportions of older drivers clearly want them.

Table 3 Rank Orders and Mean Ratings for Sources of Information about Driving

Rank Order	**Source of Information**	**Mean Rating (*n* = 102)**	**SD**
1	Information sent out with car registration renewals	5.66	2.18
2	RAA (motoring association) magazine	5.31	2.50
3	Doctor's feedback	5.06	2.60
4	Daily newspaper	4.45	2.57
5	Television programs	4.33	2.32
6	Feedback from family	3.94	2.47
7	Radio programs	3.49	2.41
8	Local newspapers and community/club newsletters	3.11	2.50
9	Handbooks about driving	2.93	2.45
10	Pamphlets	2.91	2.29
11	Practical driving assessment/feedback sessions	2.90	2.63
12	Driving 'refresher' courses/sessions	2.80	2.63
13	Personal call/visit to the RAA	2.66	2.33
14	Group discussion sessions	2.46	2.42
15	Guest speakers	2.22	2.10
16	Chiropractor/naturopath feedback	1.94	1.96
17	Fairs and exhibitions about healthy living	1.76	1.67
18	Internet sites	1.41	1.27
19	Video-cassettes	1.36	1.07

The drivers' mean importance ratings of the information sources in Table 3 were analysed by age and gender, as shown in Table 4 (on the next page). A one way analysis of variance found some interesting statistically significant differences *($df = 3, 95, p < 0.05$)*. Older females tended to rate television programs with less importance *($F = 5.65$)*. Older males tended to rate the following sources with higher importance: local newsletters *($F = 12.32$)*, radio programs *($F = 6.15$)*, group discussions *($F = 5.46$),* and family feedback *($F = 4.50$).* This suggested that these information sources may be important to consider when developing information provision to reach this group of drivers. However, females aged 65-74 also indicated stronger preferences for some information sources compared with the other groups: handbooks about driving *($F = 3.57$)*, pamphlets *($F = 3.91$),* radio programs *($F = 6.15$),* group discussions *($F = 5.46$),* and refresher style driving courses *($F = 3.98$).* As distinct groups, though, with respect to preference

for information source, older males and younger females did not significantly differ from the other groups, nor from each other, as no t-test between the groups was statistically significant *(p > 0.05)*.

The topics covered in the Australian older driver handbooks did not tend to match any of the drivers' issues of concern, especially in so far as presenting information about coping with the attitudes and behaviours of other road users. However, such topics as negotiating roundabouts and intersections, self-assessment of health and of driving behaviour, and effects of medication on driving, which received substantial coverage in the handbooks, were indicative of the importance the older drivers said they placed on road rules, medications and self-assessments.

Some professionals, at interview, said any information provision should be user-friendly, not seemingly patronising, and not tending to overload the driver with information. Others stressed a need to dismantle various myths and stereotypes about older drivers, including those that the drivers themselves hold. The appropriateness of older drivers' personal views of their driving, such as obtained through self-assessment opportunities, was considered to be quite important by the professionals. Additionally, the professionals

Table 4 Information Source Importance - Mean Ratings, by Age and Gender

Source	**Males 65-74 Mean (SD) *(n = 39)***	**Males 75-85 Mean (SD) *(n = 19)***	**Females 65-74 Mean (SD) *(n = 27)***	**Females 75-85 Mean (SD) *(n = 14)***
Handbooks*	1.73 (1.62)	2.38 (2.36)	3.67 (2.87)	2.38 (2.22)
Pamphlets*	1.82 (1.47)	3.15 (2.38)	3.33 (2.67)	1.38 (1.39)
Daily newspapers	5.27 (2.33)	3.62 (2.87)	4.25 (2.67)	4.77 (2.71)
Local newsletters*	1.27 (0.90)	4.85 (2.88)	3.67 (2.61)	1.31 (1.11)
RAA magazine	4.64 (2.94)	5.00 (2.83)	5.75 (2.38)	6.23 (0.93)
Call RAA	1.82 (1.94)	2.08 (1.93)	3.08 (2.64)	2.23 (1.92)
TV program*	4.00 (2.37)	4.46 (2.44)	5.00 (2.66)	2.85 (2.08)
Radio program*	2.55 (2.02)	3.54 (2.44)	4.50 (2.54)	2.38 (2.18)
Video-cassette	1.00 (0)	1.15 (0.55)	1.25 (0.87)	1.00 (0)
Information with renewals	5.18 (2.40)	6.23 (1.59)	5.67 (2.10)	5.00 (2.80)
Group discussions*	1.55 (1.81)	3.00 (2.83)	2.75 (2.70)	1.23 (0.83)
Guest speakers	1.73 (1.62)	1.38 (0.77)	2.33 (2.42)	1.00 (0)
Fairs & exhibitions	1.50 (1.27)	1.92 (1.80)	1.58 (1.38)	1.00 (0)
Doctor's feedback	4.27 (2.76)	5.77 (2.20)	5.33 (2.67)	5.54 (2.44)
Chiropractor's feedback	1.36 (1.21)	1.46 (1.99)	2.08 (2.31)	1.00 (0)
Family feedback*	3.91 (2.21)	5.62 (1.85)	3.83 (2.76)	2.15 (2.30)
Practical assessment	2.09 (2.43)	2.62 (2.63)	2.92 (2.71)	2.85 (2.88)
Refresher courses*	2.64 (2.80)	2.15 (2.30)	3.92 (3.06)	1.00 (0)
Internet sites	1.55 (1.81)	1.38 (0.96)	1.25 (0.87)	1.00 (0)

* significant age/gender differences, using ANOVA, $p < 0.05$

believed a major concern among older drivers is their interaction with others on the road, which tended to accord with older drivers' stated main concerns. During their interviews, the professionals were asked to numerically rate the importance of the same set of information topics as was asked of older drivers. There were some interesting contrasts when the professionals' mean ratings were compared with those of older drivers. The mean rating among older drivers for information about practical driving assessment services was 4.5, but the

professionals rated it with a mean importance rating of 6.0. An even starker contrast is the 3.65 mean rating older drivers accorded information about planning to retire from driving, but which the professionals rated on average as 6.0. Likewise, older drivers rated information about public transport use with a mean of 3.21, but the mean rating was 5.8 among professionals. There was a weak positive, non-significant correlation between the mean ratings of older drivers and professionals, which illustrated the strength of these differences ($r = 0.31$, $p > 0.05$), as did a non-significant t-test *($t = 0.006$, $df = 17$, $p > 0.05$).*

The professionals were also asked to rate the importance of various sources of information about driving for older drivers, and some ratings differed from the older drivers' views. Although older drivers generally rated the RAA motoring magazine as an important source of information (mean 4.45), the professionals rated it with greater importance (mean 6.6). However, seven information sources were rated of low to very low importance by the drivers (with mean ratings of 3.0 or less), but which the professionals rated with moderate to high importance (means of 5.0 and above). These sources were, group discussions, practical driving assessment services, guest speakers, pamphlets, personal calls to the RAA motorists' association, handbooks and Internet sites. The few information sources for which there appeared to be agreement on a high level of importance were, doctor's feedback, the RAA magazine and information to be sent out via car registration renewals. Despite the differences found, there was a moderate, significant correlation between the mean ratings of professionals and older drivers *($r = 0.52$, $p < 0.05$),* but a significant t-test *($t = 4.65$, $df = 17$, $p < 0.05$)* between the sets of mean ratings.

4. CONCLUSIONS

This study was a relatively small-scale one. Although the sample matched the demographic profile of South Australian older drivers, it may not be representative of the full range of performance capabilities of such older drivers. This is despite efforts to recruit the self-selected participants from a range of venues and contexts. Higher risk older drivers, particularly those with cognitive or sensory decline, tend to be hard to identify except in confidential medical contexts. Consequently, the study may well be under representative of this subgroup of older drivers, and this limitation should be borne in mind when interpreting the findings. Nonetheless, the consistency of some of the findings with previous large-scale studies, suggested that some basis exists for generalising the conclusions of this study.

Most of the older drivers proved to be far more interested in maintaining their driving than the possibility of having to give up. While information provided to older drivers should be set in the context of continuing to drive, this should also be the basis for helping them reframe their thoughts of alternative options. The professionals rated the need to plan future mobility scenarios as being very salient to older drivers' needs, which contrasted with the very low importance older drivers gave to information about giving up driving and alternative transport. This mismatch is a key finding of the study, and has a major implication for those whose role it is to develop information provision for older drivers, to investigate ways of presenting salient matters of public safety so that they are likely to be appropriately received by older drivers.

About three-quarters of the drivers indicated they had made no attempt to self-regulate their driving. There is a need to identify better ways to inform and advise older drivers about the likelihood of their driving skills declining and how to plan for this. Non self-regulating older drivers might be best served by highly-personalised feedback involving recommendations to self-regulate, particularly if it comes from a doctor, as the drivers generally rated doctor feedback highly. Encouragement to self-regulate is also supported by the importance the drivers and professionals attached to information about practical driving assessment and feedback services.

Stalvey et al. (2003) recently found that high-risk older drivers in Alabama, USA, benefited from one to one educational interventions that promote self-awareness and self-evaluation of driving.

The main concerns the drivers raised (supported by the professionals' views of drivers' concerns) related to the attitudes and behaviours of other drivers, or at least to factors external to themselves, a trend also reported by Elliott et al. (1995), although this may simply reflect the concerns of drivers generally. The planning of information provision for older drivers needs to broach the matter of older drivers' interactions with other road users.

Collectively, the drivers indicated a strong preference for informal learning opportunities, particularly through the mainstream media channels of print and television. However, the dissemination of information to older drivers should occur through a variety of sources than via a 'one size fits all' approach. The results suggested a strong case for specially considering the views of females 65-75 and males 75-85 when planning information provision to older drivers.

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